

GARDENS AND GARDENING

*(New Series)*

Vol. 1 (1950) Remaking and Rehabilitation

Vol. 2 (1951) Bulbs for all Seasons

Vol. 3 (1952) Hardy Plants



GARDENS  
AND  
GARDENING  
VOL. 3

HARDY PLANTS

THE *STUDIO* GARDENING ANNUAL

*EDITORS*

F. A. MERCER & ROY HAY

THE *STUDIO* PUBLICATIONS

LONDON & NEW YORK

*This book is copyright under the Berne Convention. It may not be reproduced in whole or in part in any form without permission. Applications should be addressed to the publishers*



*Published in London by The Studio Limited, 66 Chandos Place, W.C.2, and in New York City by The Studio Publications Inc., 432 Fourth Avenue. Printed in England by W. & J. Mackay & Co., Ltd. Photogravure plates by Jarrold and Sons Limited*

## CONTENTS

|  | PAGE |
|--|------|
| EDITORS' FOREWORD . . . . .                            | 7    |
| GARDENS TO ENJOY                                       |      |
| <i>by Brenda Colvin, F.I.L.A.</i> . . . . .            | 9    |
| TALL BEARDED IRISES                                    |      |
| <i>by N. Leslie Cave</i> . . . . .                     | 24   |
| DELPHINIUMS  |      |
| <i>by Allan G. Langdon</i> . . . . .                   | 33   |
| THE ADAPTABILITY OF HARDY FLOWERS                      |      |
| <i>by T. Hay, C.V.O., V.M.H.</i> . . . . .             | 44   |
| PAEONIES   |      |
| <i>by James Kelway</i> . . . . .                       | 58   |
| HERBACEOUS PLANTS FOR EDGING BORDERS AND BEDS          |      |
| <i>by James Comber, V.M.H.</i> . . . . .               | 72   |
| HARDY CARNATIONS AND PINKS                             |      |
| <i>by Montagu C. Allwood, F.L.S., V.M.H.</i> . . . . . | 85   |
| THE CHARM OF MICHAELMAS DAISIES                        |      |
| <i>by E. R. Ranson</i> . . . . .                       | 100  |
| THE HERBACEOUS BORDER                                  |      |
| <i>by J. C. Coutts, M.B.E., V.M.H.</i> . . . . .       | 113  |
| HARDY FERNS  |      |
| <i>by Frances Perry</i> . . . . .                      | 128  |
| INDEX . . . . .  | 137  |

## ACKNOWLEDGMENTS

*The preparation of horticultural books is always a pleasurable task, since gardeners wherever they live are, without exception, friendly and enthusiastic. We have enjoyed the ready co-operation of the specialist contributors, the photographers who have spared no endeavour to supply a wide selection of illustrations and many others who have assisted in the production of the present volume and we extend to them our warmest thanks. Especially are we grateful to Mr. Ethelbert E. Furlong, and Mrs. Marjorie Jones who compiled the Index, while to Miss Kathleen Frost who has again undertaken the exacting task of preparing the book for the press our thanks are immeasurable.*

*F. A. M. and R. H.*

## EDITORS' FOREWORD

IT IS BECOMING ALMOST A COMMONPLACE IN GARDENING CIRCLES THAT ANY forward planning should be towards easier and less expensive upkeep. There are those who sigh for the old days when greenhouses and frames disgorged each May vast quantities of bedding plants to give a riot of colour in formal beds and borders throughout the summer months. But if we reflect soberly on what the post-war economic circumstances have denied us, we will find really no cause for gloom, but an invigorating challenge to our imagination and ingenuity.

For we must now learn to know new kinds of plants and new ways of using them. It is a constant source of wonder to the keen gardener that there should be so many lovely plants available to him for the garden's embellishment—plants that are not costly nor yet exacting in their requirements. Again, we are learning more and more by necessity that the *blossoms* of plants by themselves are by no means the whole story. We have to spend much more time with the foliage of our plants than we do with their flowers, so should we not pay more attention to the study of line, form and foliage colour than we have done hitherto? In this issue of *Gardens and Gardening* will be found examples of garden planning where the utmost is made of the simple beauties of line or form and where nothing grandiose or costly is envisaged. But in the main the volume is concerned with those hardy perennial flowers without which no garden can possibly succeed, and which, if properly chosen and used, can give years—even a lifetime sometimes—of pleasure.

The herbaceous border is something as British as cricket on the village green. It grew up in Britain, found its zenith perhaps in the most famous of the Scottish gardens, and now is fast becoming an integral part of even the smallest of villa gardens. Its fascination lies in its infinite variety. Broad or narrow, in sun or shade, the border of hardy flowers can reflect the idiosyncracies or specialist leanings of its owner as can no other part of the garden. The gardener who loves bright gay colours will have a brilliant patchwork for months on end. The artist will play with his plants to make colour blendings, "blue borders" or borders of any colour shadings that take his fancy. But all may find in the thousands of hardy flowers available a range of plants that can bring delight.

It is strange that so few of our hardy flowers have become the concern of specialist societies. The Delphinium, the Iris, and the Carnation in their many forms, however, have shown themselves capable of sufficient variation to warrant

the undivided attention of specialists, with the result that the flourishing societies now devoted to these flowers are, every year, working with enthusiasm to breed finer varieties and to show a lead in the better cultivation of their chosen flower. Indeed, we marvel when we look at the superb modern varieties of Delphinium, Iris, or Carnation, and think of the unpromising material from which they have all been bred. Nor are we at the end of the story, for the devotees of these flowers will tell us that the breeders are only now entering upon the threshold of wonderful new developments. The next ten or twenty years will bring us even more lovely varieties than we know at present. There are signs that even more genera are being made the subject of intensive selection and hybridization, so that in the years ahead we may hope to see new colour breaks in many of our hardy flowers, yet finer plants for our herbaceous borders.

The apparent simplicity of a well-stocked herbaceous border is deceptive, as anyone who has tried to plant one knows full well. As one of our contributors remarks, "one must know one's plants", and we are happy to think that expert contributors have given of their best in this issue to help us towards that knowledge. "Knowing plants" is, after all, the very stuff of gardening. Knowing their likes and dislikes, which—as for example the Michaelmas Daisy—like to be lifted and divided frequently to give large flowers, and which ask only to be left alone—as do the Paeonies—to flourish and enchant us for half a century. We must know those—like the hardy Ferns, a much neglected race—which will thrive in shade, and those which will support themselves without stakes or ties. The oldest of our contributors will freely admit that he is forever learning, so while we cannot pretend to have treated the subject exhaustively in this volume, we do thank our contributors for a wealth of information which will guide the intending planter and provide him with a working basis for success with hardy flowers.

One final word about the hardy Ferns. It is always dangerous to prophesy, but we feel sure that there are signs of a revival of interest in this delicately lovely group of plants. There are few people who can resist the crisp freshness of a Fern frond as it uncurls in the early summer. A shady walk or stream bordered by some of the many hardy Ferns is a scene of fairy-like beauty, and there is scarcely a garden that does not possess an odd corner, too shaded perhaps for the majority of plants, but which could be transformed by half a dozen Ferns—so generous in their return for a minimum of attention. And so we come back to our first thoughts. Let us combine the beauties of foliage with the warmth of colour to extract the full measure of delight from our gardens and gardening.

F. A. MERCER AND ROY HAY.

## *Gardens to Enjoy*

By BRENDA COLVIN, F.I.L.A.

THE GARDENS OF BRITAIN ARE WORLD FAMOUS, AND ARE BY NO MEANS THE LEAST of the attractions drawing visitors to this country from overseas. If the truth be admitted, we probably owe this reputation to our climate and our love of gardening rather than our flair for garden design, but we have made some very important contributions to garden art—contributions which are characteristic of our way of life.

It is significant that the movements in garden design which originated here and have been borrowed by the rest of the world are those which tend in the direction of freedom, but a freedom which is the outcome of logical and orderly design.

Where formal gardens are concerned we have borrowed from every available source, and we have never really jettisoned our appreciation of formal design. But the "landscape" style of the eighteenth century was our first great contribution to the art of garden design, and in this present century the world has been watching our experiments in the free grouping of an enormously increased range of plants within the framework of widely differing garden styles. Those experiments have often been more successful from a horticultural point of view than for their aesthetic value. But we are learning from our mistakes.

The photographs which follow are chosen to show every degree between geometrical and free treatment, but they are all of the present day. They range from the rectangular ranks of graduated colour enclosed by neat clipped Box hedges shown in the top illustration on page 13 to the woodland effects on pages 17 and 18.

Since the English love of gardening has so much influence on our garden design, particularly in these difficult times, references to some practical gardening aspects are inevitable even in a brief review such as this. The two aspects could be kept quite separate if one were discussing French gardens of the seventeenth century, but when discussing our own gardens of to-day the threads of gardening and garden design are closely intertwined—and so these comments are about both aspects.



Whatever our personal preferences in garden styles—whether we prefer formal or informal gardens, traditional or free design, brilliant colour or sober restraint and dignity, the one fundamental principle common to all is that our appreciation of plants depends on their setting and grouping.

The relationship of each group to its neighbours, to its background and all its surroundings is of far greater consequence than the individual beauty of any single plant or flower.

Flowers, in most cases, last but a short time. Foliage is far more enduring. The whole shape and character of a plant, and its general habit of growth counts for more in the long run than the particular quality of its flower, important though that may be.

Modern conditions may be leading us back to a greater realization of this simple fact which, though it is inherent in all great garden design, has too often been overlooked in our recent efforts to crowd quantities of new hybrids and "introduced" plants into our gardens. We want to grow too much but are realizing that we must restrict our choice for the sake of visual simplicity and in order to lay the right stress on the fundamental values of mass and void in the garden composition. In order to gain the fullest appreciation of contrasts of light and shadow, and of textural variation in plants, we must substitute interesting three-dimensional design for the elaboration of flat two-dimensional pattern on one hand, and horticultural confusion on the other, yet we hope at the same time to make the best use of all the new plants available by using them, not as specimens, but as components of a unified design.

These remarks apply in particular to the ornamental part of any garden. A garden can be thought of as an extension of the house: some part of it is an extension of the kitchen and should provide much of the food prepared in that kitchen—it is the working part of the open space. The rest is for recreation and leisure and can be regarded as the extension of the living rooms. Our great need in this more ornamental part is for calm seclusion and harmony, where the restlessness and rush of our working lives can be shed while we resume the slower "tempo" and relaxation of our choice. The garden is a place to live in and should be designed primarily for that purpose, and be given all the shelter and seclusion and resting places needed. But it is also a place which provides endless variety and change as the year goes round, with rich contentment for the eye at every stage.

Working in the garden is in itself a relaxation to many of us, but the ideal is to have as little essential work as possible. Most of us like to have some gardening to do, with a little pottering—and lots of lounging according to the climate.

The garden that comes nearest to this ideal is one which has plenty of shade-giving trees, some good groups of flowering shrubs and a comparatively small



area of sunlit lawn, with few flower beds except those around the house. Shrub borders can be designed to accommodate many of our favourite herbaceous plants as well as bulbs and low spring-flowering carpeting plants such as Primroses and Violets. The lower right photograph on page 13 shows a well-planned shrub border with a few groups of Irises whose effect is far more striking in this setting than if they were seen in competition with Lupins and Paeonies. The succession of seasonal accent has been well thought out in this group. It has enough evergreen solidity to give satisfaction through the winter. In early spring the *Megaseas* would have given the main flower colour until the *Berberis* blossomed in May. In June, when the photograph was taken, the Iris flowers held the centre of the stage, and later on it will be the flowers (and finally the berries) of the large leaved *Viburnum rhytidophyllum* seen on the right. The point to notice in such a group is that if there are periods when none of its components are actually flowering, the interest falls on the contrasted qualities of the foliage. The strong differences of line and texture in the leaves are a joy in themselves. The third photograph on the same page, which was taken at a time when no plant was flowering, illustrates the same point. The plants in this group are *Antholyza*, *Senecio Greyii* and *Senecio clivorum* with *Iris sibirica* beyond. But one feels that the group would have been more satisfactory had there been more variation of height. Shrubs in the background, as in the former picture, could have made a more pleasing composition and would have given more form to this view.

The top photograph on page 14, which shows a curved paved path and lavender hedge leading to some steps and a white seat in the shade, depends for its interest on the play of light and shadow, and the strong contrasts of texture in the plant material, rather than on any flower colour, though there are bulbs and wild plants under the trees. The strong rhythm of the curves is better appreciated in these restrained tones than if they had been defined with flower beds.

An area of quiet tones such as this is particularly valuable at the entrance to a garden, and it prepares the eye for a brilliant colour effect which will seem all the more vivid by contrast. The lower photograph on page 14 of rising terraces flanked by a long herbaceous border is seen in full sunlight and has a wealth of colour and incident which would be more appreciated if approached through a region of quiet tones than if the eye was already glutted by colour and light. The background of tall trees is the making of this picture: without them the succession of horizontal lines might have become oppressive.

On page 15 the picture of another seat seen against a Box hedge, and a fine group of Pines, again points to the importance of the trees. We have only to imagine either of these pictures without the trees to realize the vital part these play. Another feature of this picture is the difference of treatment between the

two sides of the grass walk, so that instead of stepping from an area of low tones to one of brilliance we see them sharply contrasted in a single view. We notice, immediately, how telling is the bulging form of the Box hedge, with its clipped surface intermediate in texture between that of the smooth turf and the irregularity of the flower border. The flat mown turf brings these contrasts of form, colour, and texture into sharp relief.

We cannot all find room for the tall trees which mean so much in these pictures, but on page 16 there are three examples of similar effects achieved on a far smaller scale in tiny town gardens.

Beauty of form and texture in close-up detail can be had in every garden whether large or small. Groups can be planted with this object, in which plants of different quality enhance each other's effect through contrast, as in some of the examples already given, or single plants of outstanding character can be placed in significant positions. The deeply fissured and twisted bark of Sweet Chestnut is good for this purpose, or, in smaller gardens, the stems of Silver Birch and Mountain Ash. Other small trees less well known but not less enchanting from this point of view are *Prunus Serrula*, an attractive species of cherry with bark like polished mahogany, and *Acer griseum*, a Maple whose peeling bark reveals an inner bark of burnt umber. *Arbutus hybrida* is a lovely evergreen with richly coloured bark on smooth curving stems.

Any well composed garden picture, to which attention is to be drawn, gains much from being seen in a frame of tree stems and shadow, as we see from the lower photograph on page 15, where a group of sculpture is seen under the arching branches of some trees.

Mown grass paths running through orchard trees with rough grass on either side are easy to manage; they look attractive whether straight or gently curving. The contrast between smoothly mown turf and roughly scythed grass is pleasant at any season, but particularly in spring when we can have bulbs and Forget-me-nots and *Anemone appenina* in the rough grass under the trees. One of the most delightful effects is a mown walk with Bluebells growing thickly on either hand. In such positions, the spring planting need not be confined, as it too often is, to Narcissus or Daffodils. Besides Winter Aconites, Snowdrops, Bluebells and the Woodland Anemone there are hosts of plants which enjoy the cool, shady conditions and which left alone will increase and establish themselves. It may be difficult to keep turf in good heart under such conditions, but a woodland carpet of Bugle, Ground Ivy, Woodruff and Wild Violets can be encouraged; and in the rougher parts, plants such as Columbines, Wild Cranesbills (*Geranium sylvaticum*, *G. pratense*, and others), Foxgloves, Solomon's Seal, to mention only a few of the plants which enjoy these conditions, will give a great deal of pleasure for little labour. The kind of labour that is needed in such an



Above: This border on a formal terrace is divided by dwarf Box into panels of graduated colour. Right: Each component of this "concerto" holds the stage during its flowering period. Below: *Antholyza paniculata*, *Senecio Greyii* and *Senecio clivorum* are interesting for colour and texture contrasts, even when none is flowering





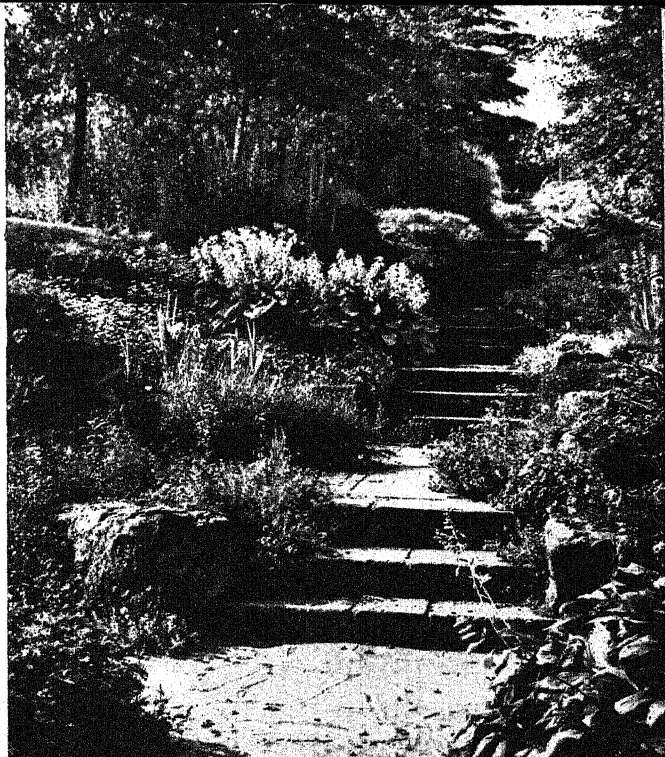


*Above: The charm of this corner depends on the interplay of light and shadow emphasizing the varied tones of green seen in Yew, lawn and Lavender*

*Below: Shallow terraces, rising by gentle degrees, make easy a transition between the house (from whose window the picture is seen) and the higher ground behind*



*Right: An interesting treatment of a steep bank, with a series of steps marked by massive plant groups seen in a shady setting*

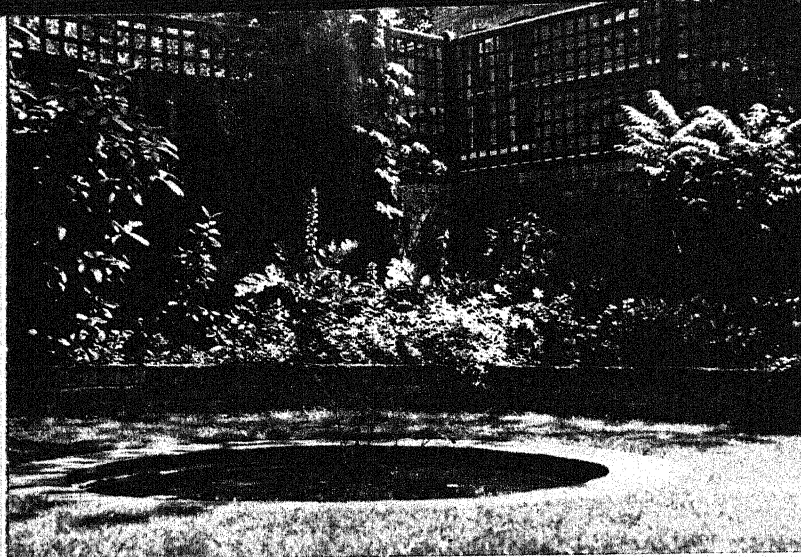


*Left: Colour and elaboration in the border on the right is balanced and justified by the quiet simplicity of the setting and the strong textural contrasts amongst the green tones on the left*

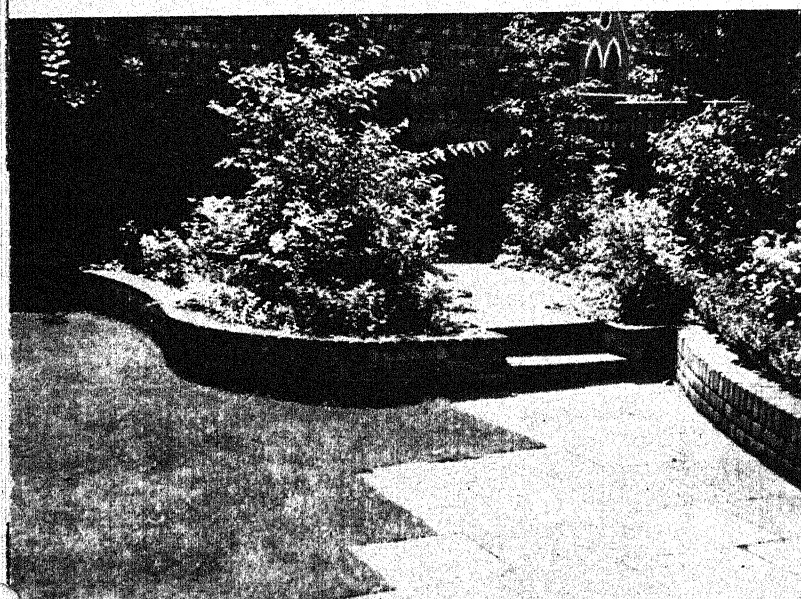
*Right: This group of sculpture in an informal setting is framed by trees carefully trimmed to focus attention on the central feature. Sculptor: Siegfried Charoux*







*In a small town garden—plain grass and a pool on the lower level are the foil for plants of sculptural quality, catching the light on the raised border*



*Grass and stone paving on the horizontal planes, with brick for the vertical planes, contrast with planting of free or non-geometrical type. The strong curved shadow of the low brick wall is interesting*



*A tiny back-yard garden, heavily shaded by a tree, enlivened by white wash on the walls and tubs of Geraniums on low platforms*



Left: A single plant of fine habit and form, grown in a carefully chosen position, can be better than whole borders of muddled shapes—*Bocconia cordata*

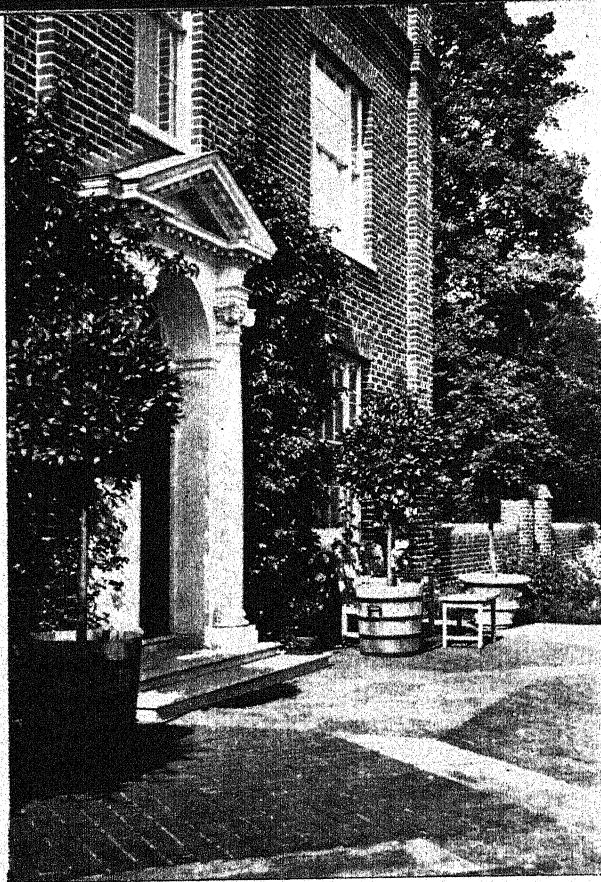
Below: *Stachys lanata*, with the sun on its pale woolly leaves, seen against a shady background. This common plant thus looks like some rare exotic



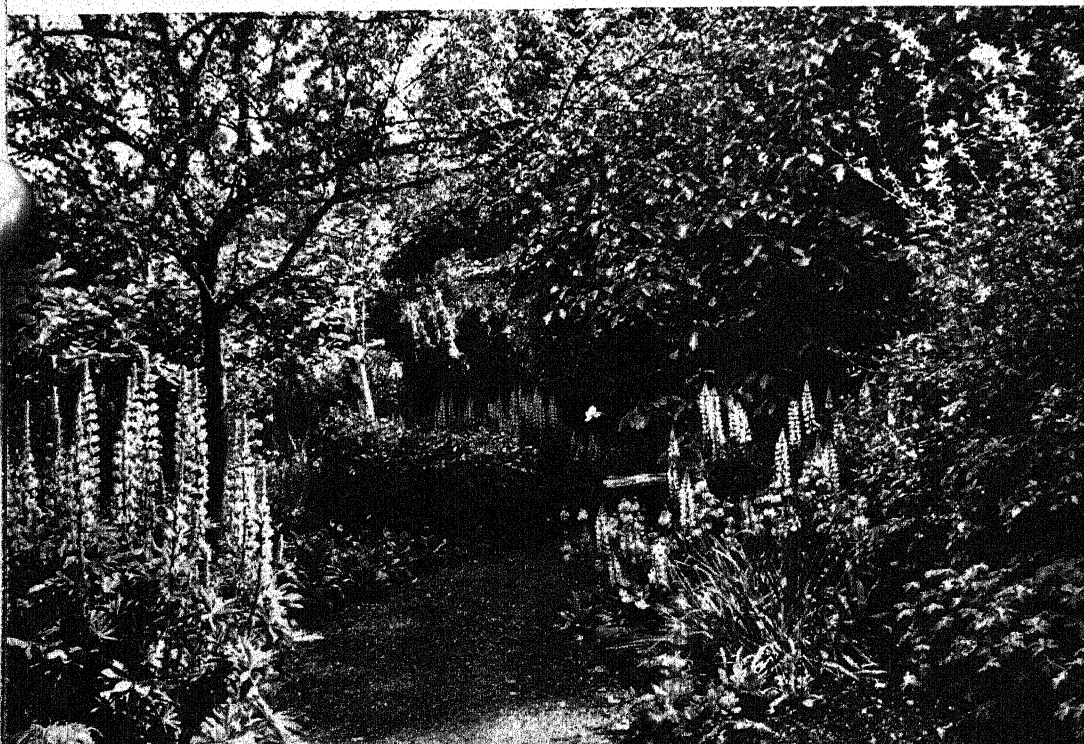
Below: The bank of a small stream in spring with hanging strands of weeping willow picking up the tones of *Daf-fodils* in the foreground





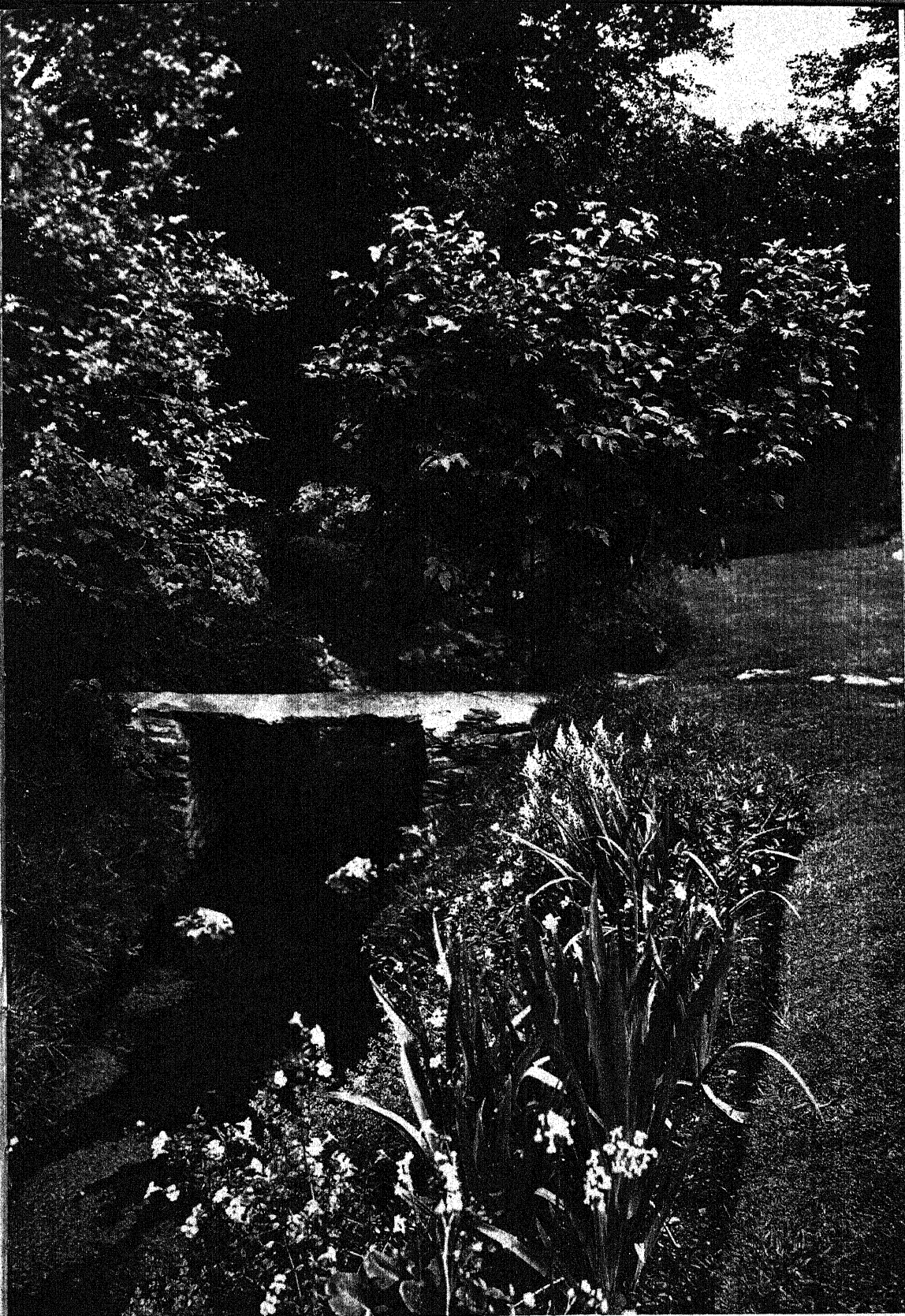


*A terrace by the garden door, designed as an outdoor extension of the house. Brick and stone are combined in the paving, on which are placed garden furniture and trees in tubs*

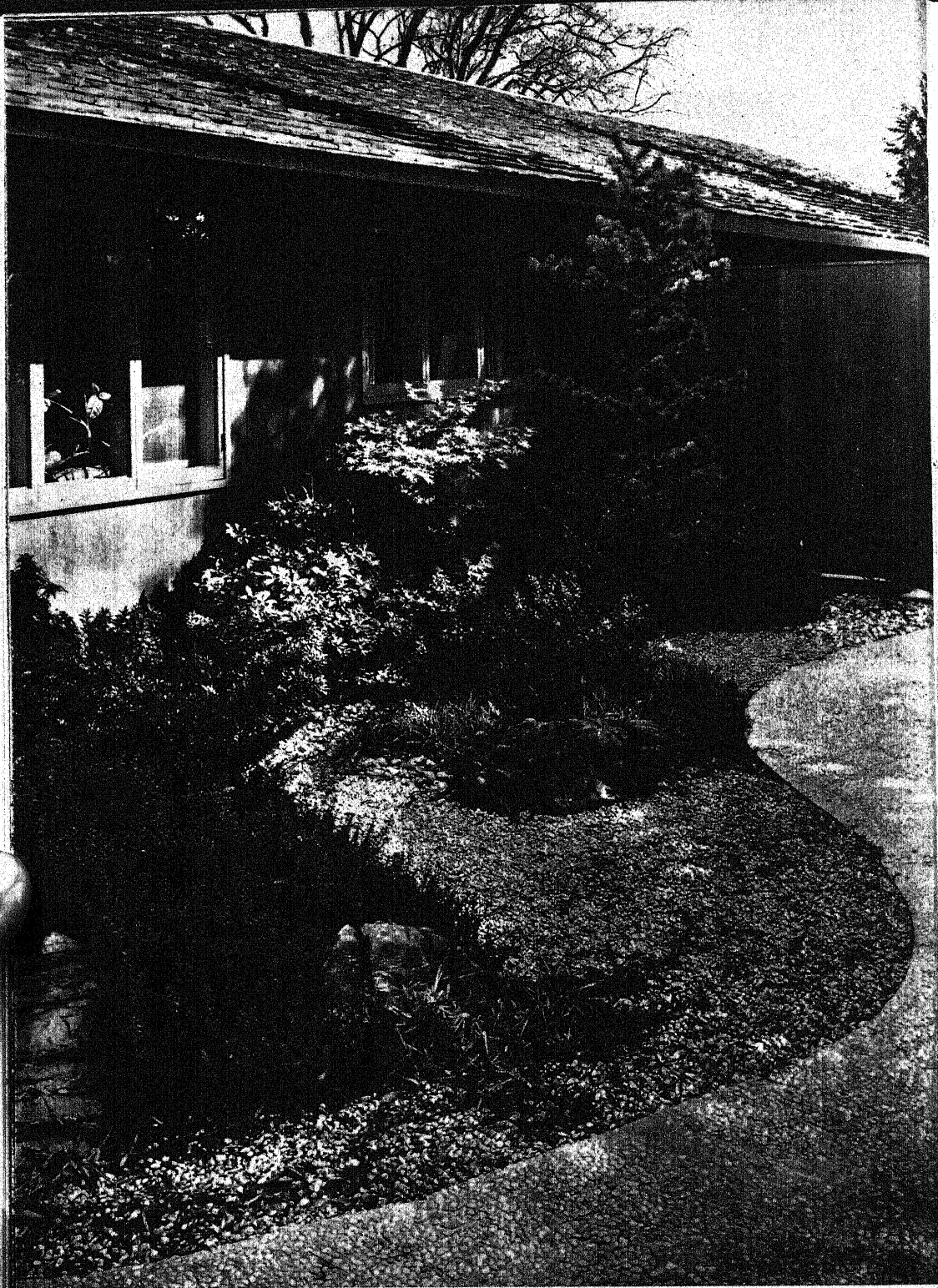


*The bold grouping of plants under trees, and the curving path, lead the eye on to the bend and make an inviting walk*





*The low plants in the foreground of this picture provide a touch of colour without disturbing the simple character of the rest*



*"The Garden of 100 Stones"*

*Very Japanese in feeling, this group of foliage plants brings together the straight lines of the house and the curved path. Interesting textural effects are given by the use of rocks and pebbles. Landscape Architect: Ethelbert E. Furlong*



area is control of the more vigorous weeds such as Nettle, Dock and Bramble, but if these are eradicated at the outset by selective weed killers they need not trouble us greatly at the later stages.

In addition to the wild plants mentioned above we may grow a few Lilies or Japanese Anemones or choice woodland shrubs in carefully selected spots, but for the main effect it is easier to keep to native plants which increase more rapidly, or annuals and biennials such as Forget-me-not, Honesty and Foxgloves which can be grown from seed sown broadcast where they are needed.

The best hope of success with this method of gardening is to allow all the plants to grow closely and have the ground covered as in Nature. Indeed we might call the method not "gardening" in the ordinary sense, but a mild interference with Nature. It is essentially an owner-gardener method, unsuited both to the professional gardener and his employer, but one which gives endless delight to the innate "potterer". It calls for toleration of the less virulent weeds and some consequent untidiness. In these wilder parts under the trees, we can accept gratefully any self-sown plant which flowers and helps to cover the ground and does not resent the scythe when we feel this to be necessary. The Lesser Celandine, Wild Arum and the little Periwinkles and Enchanter's Nightshade are acceptable, and in some cases we can admit even Hedge Parsley for its lacy beauty in flower. But we may feel it necessary to wage war on anything which tends to invade the tidier parts of the garden. Some plants may be allowed to flower, but not to seed, and can be scythed before reaching that stage.

It is possible to have borders of plants growing so close and thick that weeds have little chance of survival. I have in mind one such group growing under trees which has in the background some *Viburnum Burkwoodii* (a vigorous almost evergreen shrub flowering in early spring), which is quite happy in light shade. In front of these on one side the ground is occupied by white Sweet Rocket, the wild *Helleborus foetidus* (whose two contrasted greens are so lovely in winter), *Geranium phaeum*, and white Violets—all of which increase freely from self-sown seed and crowd together to the exclusion of any outsiders. At the other end of the group there are Foxgloves, Solomon's Seal, Columbines and *Epimedium pinnatum*—which seems fully capable of holding its own under these almost wild conditions. This *Epimedium* holds its leaves throughout the winter, though their colour changes from green to rich purples and russet brown: it is invaluable for winter flower arrangements in the house.

Most of the *Viburnums* enjoy shade, and many of them give winter colour, either in flower or berry. They are shrubs of beautiful shape and habit and are therefore far easier to use as material of design than shrubs such as Forsythia and Weigela whose quality depends almost entirely on the flower. The top picture on page 16, illustrates *Viburnum rhytidophyllum* against the treillage to the left,

showing the sculptural quality of its growth. Another sculptural plant—Staghorn Sumach—appears to the right in the same photograph.

The use of plants or groups of plants for their sculptural effect in this way is a fascinating study in siting. Such groups may be placed with as much care as if they were carved in wood or stone, and may play almost the same role as sculpture though in quite a different key. Another photograph illustrating this point appears on page 17.

*Stachys lanata* growing between the paving stones in a neglected garden proves the value of giving this plant poor soil and a restricted living space, but it also draws attention to its sculptural quality when seen in full sunlight against a shady background. There are a number of more stately plants which have this sculptural character. Unfortunately many of them are rather too vigorous or prolific. They need keeping sternly in check. *Polygonum cuspidatum* and the Giant Hemlock, *Heracleum giganteum* are typical. The latter seeds itself in the most unsuitable places if allowed to ripen seeds, while the former should only be used in places whence it cannot escape, such as between a wall and a mown path, or between dense shrubs and the bank of pool or lake. To gain the full benefit of their magnificent shapes, they need careful placing in regard to light and shadow effects.

Waterside planting, for those lucky enough to have the banks of a stream, river, or pool to deal with gives us great opportunities both for seasonal variety and sculptural grouping. Some of the finest winter colour can be had from the rich tones of young shoots on Willows and Dogwood. The Golden Willow—*Salix vitellina*, and its scarlet variety (*Salix vitellina* var. *britzensis*) can be grown either as tall trees or pollards, or coppiced annually to the ground, when the resultant thickets of colour are even brighter than on the free growing tree. The Weeping Willow is at its best in early spring. The photograph at the foot of page 17 shows the drooping shoots answering the tone of the Daffodils on the near bank. In summer this effect will be replaced by the charm of smooth grass running to the water's edge in contrast to the vertical lines of the Willow.

Under moist conditions quantities of fine foliaged plants are available for bold effects. In dry ground the choice is narrower, but great possibilities are still open to us. *Acanthus latifolius* is too little used to-day, though its foliage inspired the Greeks in the ornament of the Corinthian Order. *Bocconia cordata* (see page 17), is another plant with sculptural qualities: suitably sited to bring out these qualities it can be magnificent, but when seen mixed up with other herbaceous plants its effect is often lost.

Bold leaved plants of this type are best seen against masonry, brickwork or smooth clipped hedge. If grown in association with other plants, contrasts of texture should be sought. Feathery plants of fine texture such as *Artemisia* may

provide a good foil. The *Artemisia* family is a rich mine for the plantsman: one of the finest in mild coastal districts is *Artemisia arborea*, which makes a cloud of silver filigree up to four or five feet high. Smaller, but far more reliable in inland districts is *Artemisia Ludoviciana*, a very hardy perennial with silver grey leaves. These *Artemisias* are not for the wild garden: they do best in well kept borders.

And so we come back from the wild garden towards the house. Much depends on the character of the house. The photograph at top left on page 18, shows the terraces by a Georgian house. These are the immediate extension of the ground floor plan—the open air rooms of the house which should reflect its architectural character.

The plants furnishing these living rooms are chosen as a foil to the wall texture, and for the play of light and shadow they can give. Notice the importance of the shadow pattern on the white pillar of the doorway. The restrained formal treatment of these terraces serves well as an intermediary between the house and the open garden beyond.

In a garden such as is shown in this last group, we may find every degree of treatment, in a due sequence, radiating out from the house itself. Starting from the terrace, so architectural in feeling with its firm formal lines, we are led on across the calm stretch of lawn enclosed by sheltering trees, to the freer treatment of woodland paths and waterside walks beyond, where a rich variety of plants of every kind is used to give special effects as fresh views come into sight, but let us resist the temptation of loading any single view with more species than are needed to give the intended effect. Eventually the steps are led back towards the house by way of the orchard and vegetable garden which can be as pleasant as the ornamental parts, in a different mood.

Changes of mood give pleasing variety and keep the interest engaged without fatigue. We may not be quite so ambitious as the eighteenth century poet Shenstone and his admirers who aimed at evoking in the visitor strongly contrasted emotions such as awe, melancholy, gaiety, and the sense of "the sublime". Nor should we strive at contrasts so extreme and artificial as to interrupt the sense of unity and repose. Reproductions of different foreign styles or period pieces, set side by side, create the character of a museum rather than a peaceful living place. We can, however, do a great deal, even on a small scale, to vary the mood without disturbing the general feeling of unity throughout the garden. We enjoy most those gardens where each part seems to belong naturally to the rest, although each may have its individual role and character within the logical framework of the whole.

## *Tall Bearded Irises*

By N. LESLIE CAVE

WHAT ARE THE ESSENTIAL QUALITIES THAT GO TO THE MAKING OF GOOD GARDEN plants? They are, I suggest:—

1. Robust growth.
2. Floriferousness and beauty of bloom.
3. Long life.
4. No fads.

Does the tall Bearded Iris qualify for inclusion among this select company? I think so. It is very easily grown, needing little attention once planted, it is very long-lived and is generally healthy and vigorous, and its lovely flowers are produced with prodigal freedom. It is, moreover, handsome in leaf as well as in bloom, the sword-like foliage contrasting well with that of other garden plants.

But although it is a very good-tempered plant, to get the best out of it one should remember that it is a sun-lover and that it dislikes damp situations, so it should be planted in a sunny border in well-drained soil. It will make do with heavy clay, but not perhaps very willingly, and it is only fair to give it a helping hand by digging in sand, compost or old horse-manure to open up so glutinous a medium. There are some kinds of loam which with little or no preparation grow Irises to perfection, but unless one is fortunate enough to garden on such soil, it will be as well to treat the plant kindly and to dig in leaf mould, spent hops (if obtainable), compost or old horse-manure. Lime, once considered vital, is not now recommended except for the most acid soils, and if it must be applied, powdered limestone or old mortar rubble (again if obtainable) is preferable to the fiercer, slaked lime. Although the Iris is not so greedy a feeder as, say, the Hybrid Tea Rose, it has a healthy appetite, and established plantings benefit by top-dressings of superphosphate or a general fertilizer given twice a year, in spring when growth is active, and again in early September. A handful to the square yard scattered round, not on, the plants should suffice, and the dressings should be lightly hoed in. The autumn application could, with benefit, contain sulphate of potash, indeed a further winter dressing of potash should be given if it is known that the soil is deficient in that element.

## TALL BEARDED IRISES

When planting, never bury the rhizome—the woody rootstock from which the leaves ascend and the roots descend. This should be left level with the surface of the soil, with the roots well spread out underneath. Some gardeners excavate two holes, leaving a ridge between them, set the rhizome on the ridge, arrange the roots on each side, fill up with soil and firm well. It is perhaps more simple to use a trowel and make only one hole, and, so long as the roots are not bundled up higgledy-piggledy and the plant is well and solidly planted, it should go ahead. Never leave the rhizomes loose, or winds will rock them and frosts heave them, and they will pine and fade away. Planting may be done at any period of the year, but the most favourable times are in September, or immediately after flowering. If it is merely a case of transplanting in the same garden and the job is done expeditiously, no harm can come from an early shift, but I prefer to move Irises in September when they have made good root growth, and I find when moved at this time that they flower better the next year. If the plants are being given to a friend, do not lift them until early autumn. It is hardly possible to keep roots moist during a journey through the post, and I have found again and again that Irises moved out of the garden in June seldom flower well in the following season.

Plant in irregularly shaped blocks containing one kind, with the rhizomes nine inches to a foot apart. After three or four years, depending on the vigour of the variety, Irises become congested, the rhizomes creeping about in different directions, colliding and even climbing over each other, and it is necessary to lift the clumps and divide them. Do this in September, pull the clumps to pieces and replant only the healthy rhizomes, *i.e.* those from the outside of the clump: those in the centre will be either dead or moribund. Before replanting the pieces, which may be single or double rhizomes, re-make the soil, as the Irises will have taken most of the goodness out of it, and starved Irises naturally cannot produce such fine flowers as well-fed, contented ones. The Iris is a shallow-rooting plant, so fertilizers and manure should be well mixed with the top spit, not buried deep down out of reach.

Once an Iris has been planted it requires little attention beyond removal of dead flowers, which in a wet season may spoil unfolding buds, cutting down flowering stems flush with the rhizome after the bloom is over, and a general clean-up in late autumn or the early part of the year, when dead leaves should be pulled off and burned. Some growers cut the leaves down to about six inches from the ground in autumn and this practice helps towards the destruction of spores of the leaf-spot disease, assuming, of course, that the prunings are burned. Staking the flower stems should not be necessary except with a few of the tallest kinds or in wind-swept positions, so plant your Irises in a sheltered place and avoid the laborious tasks of staking and tying.



Before passing to something more pleasant, mention must be made of diseases. The three that most commonly afflict tall Bearded Irises are rhizome rot, scorch and leaf-spot, and only scorch is deadly. Fortunately this is not usually troublesome. It is easily recognized as the leaves of a sick plant turn russety-brown and look exactly as though they have been too near a fire. Very occasionally, if the disease is noticed at an early stage, the life of a plant (or rather part of it) may be saved by lifting, cutting away all affected rhizomes and replanting the apparently healthy ones, but almost always all the rhizomes of a clump perish. If the plant is an expensive one it may be worth while to cut off all the hollow, dead roots and to re-set it in some out-of-the-way corner in the hope that it will recover, but recovery is a slow process and often the patient will suffer a relapse. It is on the whole best to be philosophical and to destroy all scorched plants.

Rhizome rot, or soft rot, often attacks plants in spring, and sometimes an unhealthy appearance of the leaves will denote its presence. It almost always attacks the rhizome at the base of the fan of leaves, and to defeat it one must scrape away all the soft, rotten mush until firm white tissue is reached. Some growers wash the cut surface with a solution of Lysol but, generally, exposure to light and air will harden the wound, and the plant, beyond losing its flower stem for the season, will be none the worse. A few Irises are prone to this disease and experience will show up these culprits, some of which are as beautiful as they are unhealthy. Leaf-spot, except perhaps in the south-west of England, is almost negligible, and although it is with us most years, it does not appear to harm the plants. It shows in summer or early autumn as brownish spots on the leaves; these gradually grow larger and, in bad attacks, kill the foliage. Diseased leaves should be removed in autumn and burned.

The modern race of tall Bearded Irises can be said to have been born when the large flowered species *I. mesopotamica* and *I. trojana* were imported and used in breeding. Before that happened, all our Irises were descendants of the smaller-flowered *I. pallida* and *I. variegata*, and they were in consequence themselves small-flowered. Although breeders, by using *I. mesopotamica* and *I. trojana*, obtained tall-stemmed plants with large flowers, many of the seedlings were tender and not too easy to grow. By combining these new kinds with the older, tougher Irises, the bogey of tenderness was conquered and our present-day plants are, with a few exceptions, completely hardy. French and British raisers were the first to assist in the transformation, and two British Irises, Dominion, raised by Bliss, and W. R. Dykes, raised (but never seen) by Dykes have had a great deal to do with the making of the modern Iris. The variety W. R. Dykes figures in the pedigrees of the majority of our new yellow Irises.

But, perhaps, the most startling improvements have occurred since 1939, and



#### TALL BEARDED IRISES

these are almost all due to the efforts of American hybridizers who have, in a comparatively short space of time, added brand new colours, brightened up all the existing colours, and introduced a new race in which the characteristics of the *Oncocyclus* Irises have to some extent been linked with those of the tall Bearded forms. The latter may possibly have the most far-reaching influence on the race, but it is yet too early to prophesy dogmatically, as do our guides the racing tipsters. The aim of breeders is to produce plants of tough constitution bearing flowers with the peculiarly exotic beauty of the *Oncocyclus* species, and while progress has been made, the colour range is at present rather restricted.

More immediately attractive are the new "pinks" which range from pale pink, through salmon to peach- and apricot-orange, with a side-line of raspberry (actually light rosy-purple), decorated and lit up with startling vermilion beards. These attract the novice as well as the connoisseur and, although the tints of most are delicate, they show up well in the garden. Blues, from which all trace of red has gradually been banished and which are almost true blue, have already arrived, and very handsome they are, while another new colour, citron-yellow, a cool and refreshing shade, has also been evolved. Irises of this colour and the new pinks are being raised by the battalion in the U.S.A. and they will no doubt be still further improved.

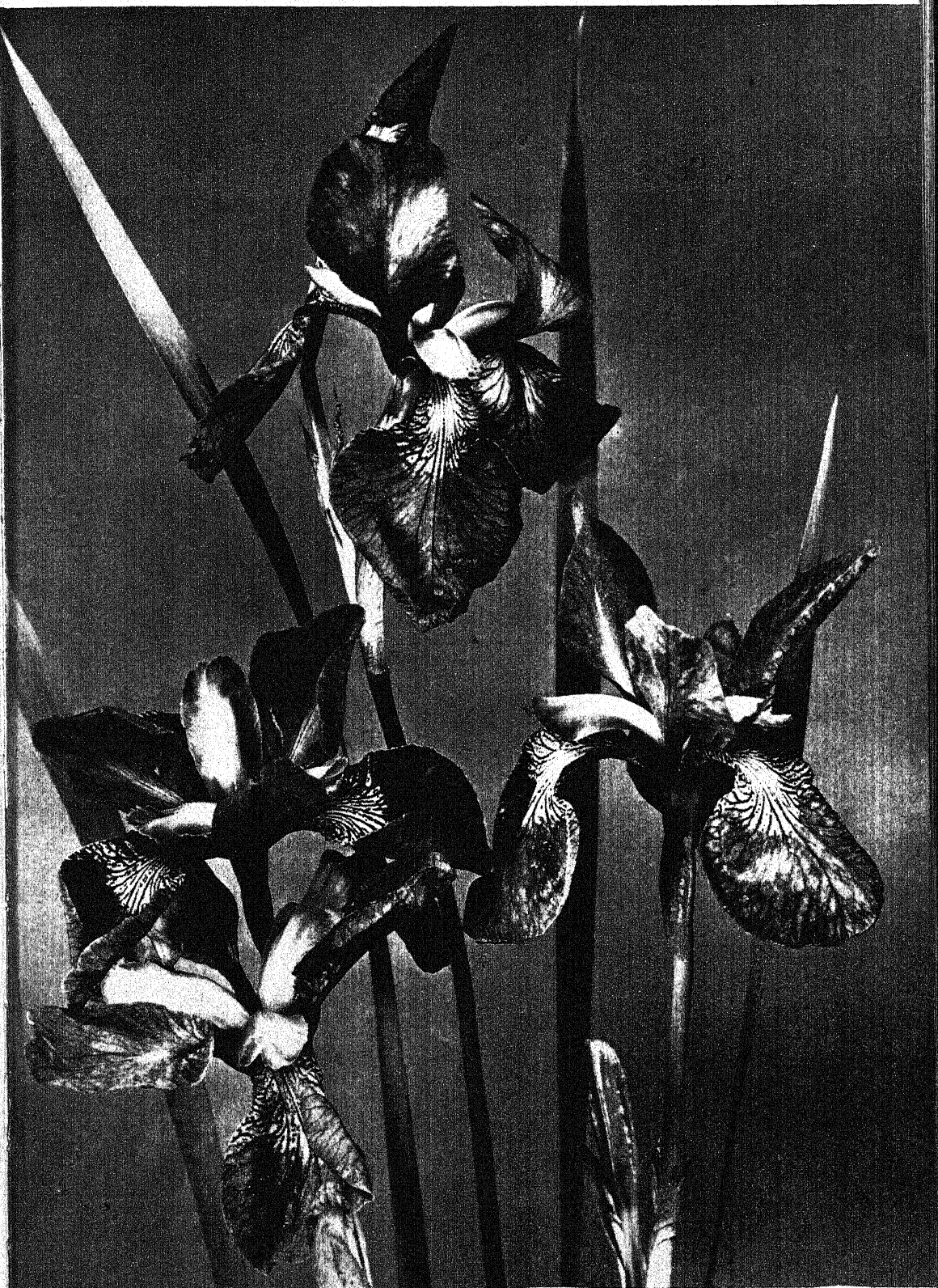
Depth of colour is the goal of the breeders for pink, while the citron-yellows need improvement in form and size. There are also new shades among the blends and the latest so-called henna ones are most pleasant. The colour is not in the slightest degree dull; it is a bright, reddish brown with an infusion of rose, and it is striking at a distance. Another innovation is the evolution of ruffles on the petals. Older Irises generally possessed smooth petals—described as "classical" or "tailored"—but nowadays a large number are delightfully waved and ruffled. This ruffling, besides giving an air of lightness to the blooms, has a practical side as it strengthens the petals and gives them power to withstand wind and rain. A minor refinement which has appeared is lacination of the petal edges; in some cases this is so marked that the edges appear to be crimped. There is still room for the tailored flowers but it must be admitted that the newer frilled and flounced beauties do tickle the fancy. Further advances are being made towards a black Iris and some very rich pieces of colour have already astonished us, but the deep yellows, except for those newest ones verging on orange, do not show any striking improvements. *Amoenas*, those Irises with white standards and coloured falls, are stubborn things and the normal white and purple pattern is only slowly being refined and brought up-to-date. From New Zealand, however, have come the newest *Amoenas* done in white and yellow; other combinations will probably follow in their wake.

# GARDENS AND GARDENING

I give below a list of outstanding Irises in their various colour classes. Most are, I am afraid, expensive.

|                    |                                 |                                 |
|--------------------|---------------------------------|---------------------------------|
| <i>Pale Yellow</i> | <i>White</i>                    | <i>Red</i>                      |
| Fair Elaine        | New Snow                        | Garden Glory                    |
| Mystic Melody      | Vigil                           | Ranger                          |
| Moonlight Madonna  | White City                      | Fall Days                       |
| Elizabeth          |                                 | Fort Ticonderoga                |
|                    | <i>White and Yellow</i>         |                                 |
| <i>Deep Yellow</i> | Pinnacle                        | <i>Violet and Purple</i>        |
| Cloth of Gold      | Summit                          | Mrs. J. L. Gibson (Maisie Lowe) |
| Joan Lay           |                                 | Vice Regal                      |
| Ola Kala           | <i>Pink</i>                     |                                 |
|                    | Cherie                          | <i>Amoena</i>                   |
| <i>Light Blue</i>  | Pink Cameo                      | Helen Collingwood               |
| Cahokia            | Pink Formal                     | Wabash                          |
| Great Lakes        | Radiation                       |                                 |
| Helen McGregor     | Strathmore                      | <i>Yellow-ground Plicatas</i>   |
| Vanda              | "Black"                         | Benton Coronet                  |
|                    | Black Banner                    | Firedance                       |
| <i>Medium Blue</i> | Black Forest                    | Banded Beauty                   |
| Blue Ensign        |                                 |                                 |
| Blue Rhythm        | <i>Pink Blends</i>              | <i>Pink Plicatas</i>            |
| Chivalry           | Tea Rose                        | Benton Daphne                   |
| Pierre Menard      | Three Oaks                      | Confetti                        |
|                    |                                 |                                 |
| <i>Cream</i>       | <i>Variegatas</i>               | <i>Blue Plicatas</i>            |
| Amandine           | Staten Island                   | Aldura                          |
| Desert Song        | Red Torch                       | Blue Shimmer                    |
| Starshine          |                                 | Benton Bluejohn                 |
| Benton Pearl       | <i>Apricot and Brown Blends</i> |                                 |
|                    | Argus Pheasant                  | <i>Oncobreds</i>                |
| <i>Orange</i>      | Cordovan                        | Elmohr                          |
| Arab Chief         | Melodist                        | Lady Mohr                       |
| Rocket             | Sunset Blaze                    |                                 |
| Royal Sovereign    |                                 |                                 |

I should not like to close these notes without some reference to Iris species, whose appeal is so different from that of the flaunting giants. All Iris lovers should grow the winter-flowering *Iris unguicularis* (syn. *I. stylosa*) and if they plant it against a sunny wall in poor soil in April or September they will be rewarded in due course with dozens of delightful lavender flowers in the depth of winter. For those with a little patience I recommend *I. innominata*, a small apricot-orange fairy from Oregon and *I. Douglasiana*, slightly larger, from California. As they transplant badly, grow them from seeds and ensure a feast of beauty for many years. There are many more gems among the wildings, the miniature *I. cristata* from America, *I. chrysographes*, particularly the deep red-purple form, *rubella*; *I. magnifica*, from the "Juno" section; and *I. histrioides*, most lovely of the "Reticulatas". Try some of these little beauties as well as the tall Bearded varieties.



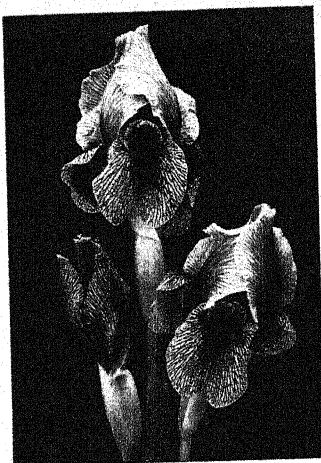
*Iris sibirica*

*A moisture-lover which grows to 3-4 feet  
with flowers of white or various blues*





*Iris Blue Shimmer*



*Iris Regelio-cyclus Teucros*



*Iris Strathmore*



*Irises at Summerlea, Thames Ditton, Surrey*



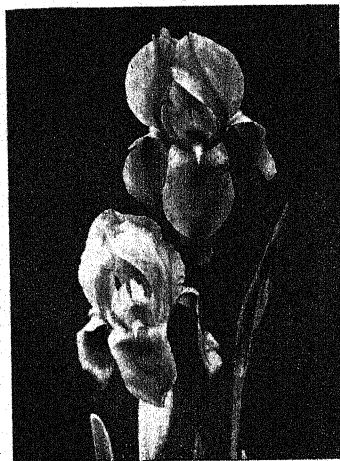
*Iris atrofusca*



*Iris Mary Geddes*



*Iris Elizabeth*



*Iris Hoogiana*



*Iris Staten Island*

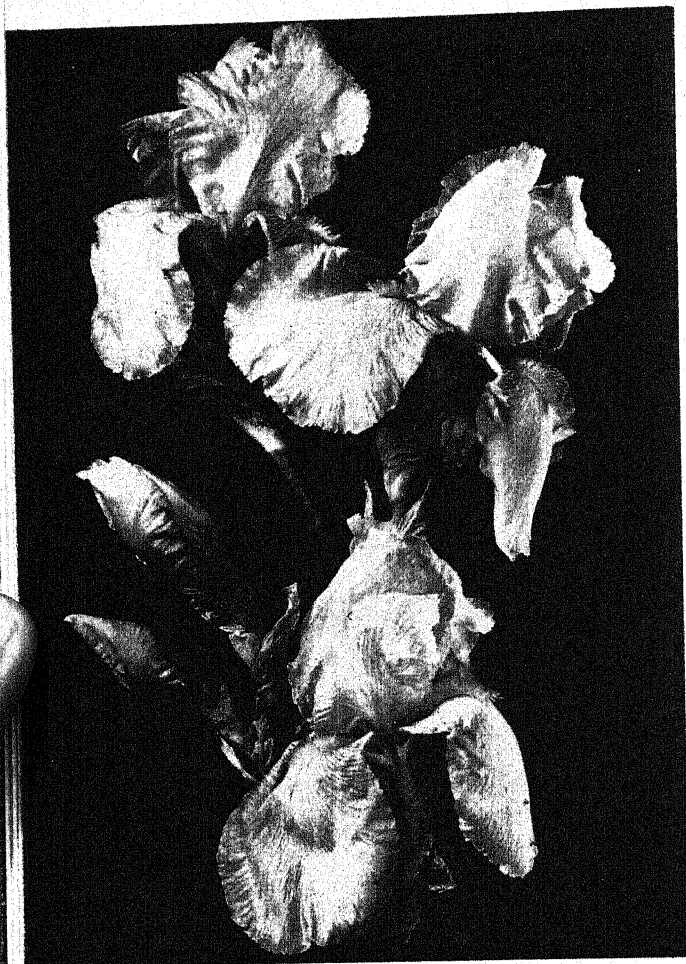


*Iris Benton Bluejohn*



*Iris New Snow*





*Left: Iris Benton Pearl.  
The white form bred by  
Sir Cedric Morris in his  
Benton series*

*Below: Iris attica. One of  
the dwarfs (5 ins. high);  
yellow and purple forms*



## *Delphiniums*

By ALLAN G. LANGDON

IT IS IMPOSSIBLE TO THINK OF THE HERBACEOUS BORDER WITHOUT AT THE SAME time bringing to mind the perennial Delphinium. In common with most border plants, its origin was humble if not obscure, and yet to what heights has it risen! Not without cause has this grand plant been described as the Queen of the Border. Consider for a moment those especial qualities possessed by the Delphinium that contribute to its particular merit as a border plant. First of all its colour. The one colour above all others associated with the Delphinium is, of course, blue—we don't need A. A. Milne to tell us that! Pale sky-blue, through cobalt, to deep, almost midnight blue—all are there. Purples too, from deep royal shades to pale, silvery-mauve, increase the colour range, while the shape and habit ranges from the tiny branching Belladonnas through the short, almost stumpy, spikes that fit in so well in the middle of the border to the statuesque and tapering pillars, up to eight feet in height, that take up their positions behind them.

As a cut-flower, too, the Delphinium triumphs, and in this sphere the side-spikes produced by all Delphiniums to a greater or lesser degree are particularly useful, and are not out of place in any environment. A vase or basket of the long main spikes is most beautiful in a corner of a room, while the smaller spikes and even the individual "pips" can be used in containers of any shape or design to most charming effect.

The ease of cultivation of Delphiniums also commands the attention of most amateur gardeners.

Delphiniums are very easily grown from seeds as they require no special equipment or conditions other than those at hand in the average garden. The seeds may be sown either in the autumn or the spring, although as a rule, those sown in the autumn germinate quicker and have a higher viability than those stored through the winter for spring sowing. Unless the seeds are kept very cool and in bulk a certain loss of fertility occurs. It is, therefore, advisable not to purchase packeted seeds in the autumn if they are not to be sown immediately. The seeds distributed by specialist growers in the spring have been kept under ideal conditions and have lost none of their vitality although they may take a little longer to germinate.

It is possible, although not always advisable, to sow Delphinium seeds in the open ground, provided the sowing is made very soon after the seeds have been gathered, say in late July. The soil at that time of year is very warm and germination will be effected in a very few days if the seeds are sown in very shallow drills, lightly covered and, of course, kept moist. The chief drawback to raising plants by this method is the difficulty of protecting the small seedling crowns against attack by slugs during their dormancy.

Whether sown in autumn or spring, the best conditions are obtained by sowing the seeds in shallow boxes about two inches deep in a well-drained and not too rich soil. If autumn-sowing is adopted, the boxes may be placed in a cold frame where they will remain throughout the winter. Make sure that the seedlings are well out of reach of slugs which will create havoc if allowed to roam at will. As winter approaches, the seedling leaves will gradually turn yellow and eventually decay, but examination will show that small "crowns" remain and these will be dormant until early the following spring when they will produce new growths and may then be planted out where they are to flower. During their resting period they should be neither very wet nor very dry as either extreme is harmful. Frost alone will not injure them unless they have been overwatered.

If sowing is deferred until the spring then a greenhouse affording gentle warmth is of considerable help. A temperature of 55° F. is ideal, as this permits early sowing and the larger the plants are when planted out-of-doors the better the flowers will be in August and September. It is advisable to give the seedlings more room by transplanting them into further boxes as soon as they are large enough to handle. When well established in these boxes they should be hardened off for a fortnight in a cold frame before planting in the open ground.

It should be well understood that garden Delphiniums are hybrids and so will not produce progeny identical with the parent plant. Considerable variation among the seedlings, both in colour and type, must therefore be expected. Nevertheless, it is well worth while growing Delphiniums from seeds, as many attractive and desirable plants will result if the seeds have been procured from a specialist's strain.

Although all named varieties of Delphiniums must be raised from seeds in the first instance, the only way to perpetuate them is to propagate vegetatively, *i.e.* by cuttings. For the commercial grower this is, of course, a prolonged and costly business and it is the reason why specifically named varieties are more expensive than those grown from seeds. The amateur gardener who possesses very limited space for his Delphiniums is well advised to grow named varieties as he is able to select those with the colour and habit to suit his individual desires which he is quite unable to do with un-named seedlings. The list which follows this article on page 43 should help him in his choice.



## DELPHINIUMS

The cuttings used for propagating are the young shoots which appear at the crown of the plants in the early part of the year. They are taken off when about three inches high and should be severed close to the root-stock, care being taken to ensure that the stem is solid and woody at the base. Hollow-stemmed cuttings are useless. Opinions differ as to whether heat is necessary to assist rooting, and the correct solution probably depends on prevailing weather conditions at the time the cuttings are taken. What is certain is that fluctuating temperatures should be avoided. The cuttings will root readily in cold frames if they are not taken too early in the year. Sand or a sandy loam are suitable rooting media and either pots or boxes will serve as receptacles. Rooting will take place in about six weeks and after a period of exposure to full light and air the plants may be set out in a nursery bed or be put in their permanent positions in the border, provided they are not allowed to become overgrown by strong-growing plants. It is a good practice to pinch out the point of the cutting when it is six to eight inches high. This will obviate the need for staking, root-action will be encouraged, and a stronger plant will eventuate. Each plant will provide a few small spikes of flowers during August and September, but their full glory will not be seen until the following June and July; in the meantime a strong, healthy plant will be built up and that should be the chief consideration during the first year's life of the cutting.

A method of propagation often adopted is that of division. This is best carried out in the spring when the plants are about three inches high. The old plant should be lifted with as much root as possible and any decayed parts removed and burnt. The remainder can then be split into as many parts as possible, so long as each portion has one or more strong shoots and a sufficient supply of healthy roots. It is inadvisable to replant weak growths, and should any signs of disease be apparent the whole plant should be destroyed and replaced with a new stock.

Opinions vary greatly as to the best time to plant Delphiniums and it is impossible to be precise on this debatable question. As a general rule most growers would probably advise spring planting, but the final decision must be dependent upon soil conditions. On the lighter soils, autumn planting can be carried out with little fear of winter losses but on heavy, cold soils spring planting is undoubtedly the better practice. Whichever period is chosen the all-important factor is the condition of the soil. To plant in an uncongenial soil at any time is to court disaster, either partial or complete.

If the autumn is the period chosen, the earlier the planting is carried out the better, while the soil is still warm; and in any case it should be completed by the end of October. Early autumn planting will encourage a small amount of new root activity and this will ensure the plant's establishment and considerably assist in its winter survival. Flower spikes produced as a result of early autumn

planting are usually longer in the first year than those from spring planting, but there is little, if any, difference in subsequent years.

Fortunately, Delphiniums need no special kind of soil. Whether it is heavy loam or sandy they can be grown with equal success so long as certain fundamental requirements are provided for them. The most important of all is a soil which has been deeply dug, liberally enriched with humus in the form of rotted manure, leaf-mould or compost, and brought to a fine tilth. To this should be added a good dressing of bone-meal, and if the soil is light and sandy a fairly generous sprinkling of sulphate of potash or wood-ash should be given as well. Even in heavy soils a light dressing of potash is beneficial. If the soil is of an acid nature, lime also should be added.

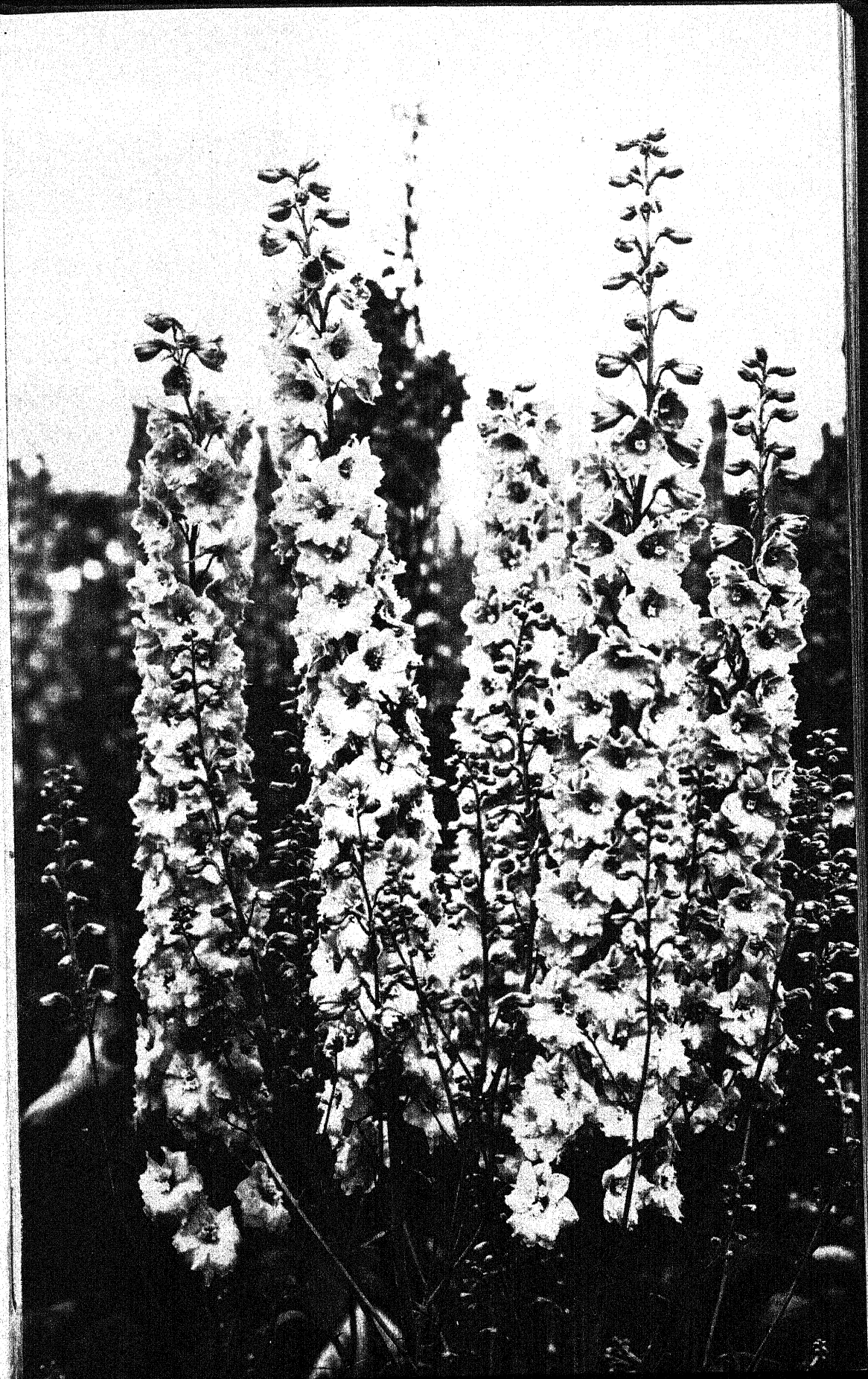
It is impossible to over-emphasize the necessity of thorough cultivation of the soil previous to planting. All the manures in creation will be of little avail if good, deep digging is neglected. True, the plants may survive in badly cultivated ground, but the resulting flowers will be a mere travesty of their potential beauty and magnificence. Good Delphiniums deserve the best conditions we can provide for them.

Most Delphiniums are grown in association with other plants in herbaceous borders where they are most effective. For this purpose they are best planted in groups of three or five according to the width of the border. For exhibition purposes they are usually grown in straight rows and given considerably more room so that they can be more easily tended.

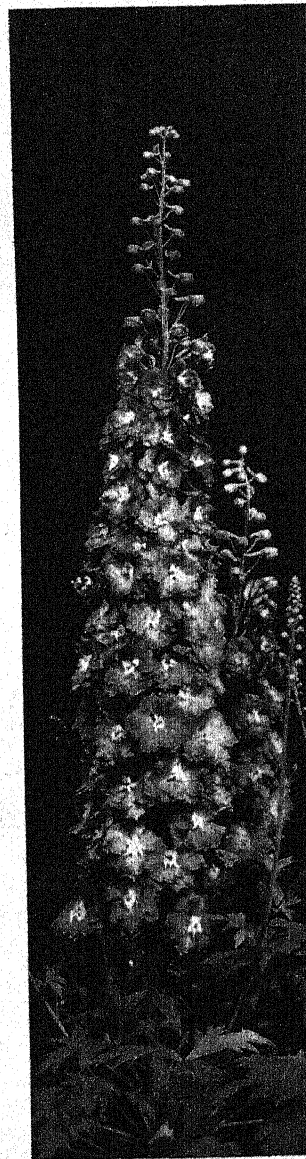
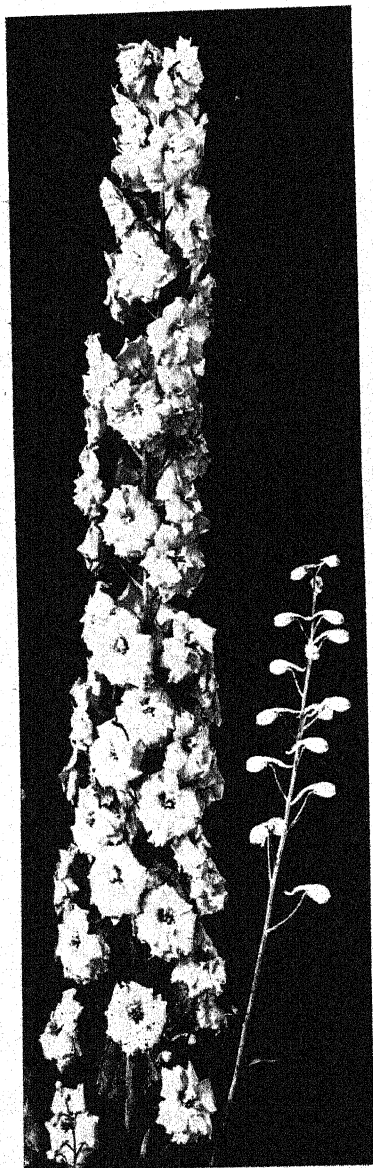
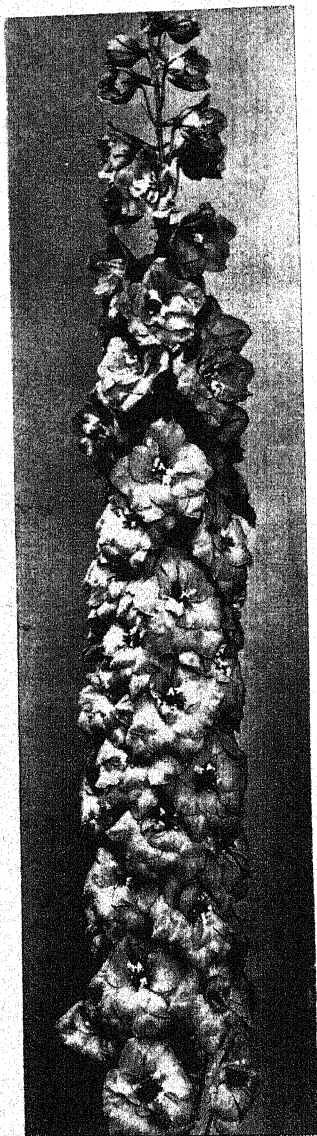
Great care should be exercised in planting Delphiniums as much will depend on the initial encouragement they receive. Every plant should have a nice bunch of roots and these must be carefully spread out over the soil within the hole which has been prepared for them, covered with two or three inches of friable soil and pressed firmly without making the ground hard. Plants which are suspended in loose soil will never grow satisfactorily. When planting is completed the top soil should be moved lightly to prevent cracking and to permit rain or artificially applied water to reach the roots. It is thoroughly good practice to be certain that, at no time during the summer and early autumn, are the plants without a sufficient supply of moisture at the roots. In an average season the normal rains supply all that is needed, but should a dry spell coincide with the opening of the flowers a good soaking will add to their size, considerably increase the colour intensity and lessen the possibility of an attack of powdery mildew with its attendant weakening effect.

Delphiniums will rarely produce their best flowers during the first year after planting. It is wise, therefore, to reduce the number of spikes on each plant in the first season. By this means they will build up their strength, increase their subsequent vigour and ensure a longer span of life.

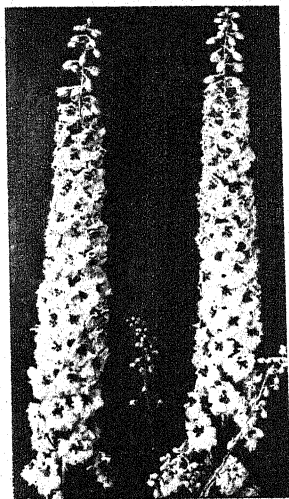
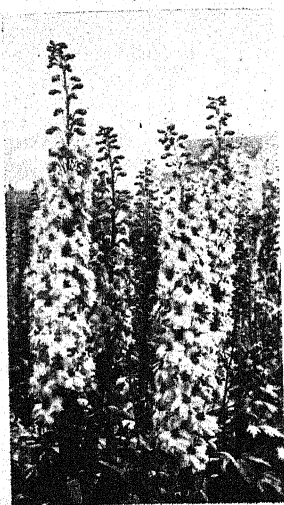
*Opposite: Delphinium The Artist. Sky blue—without even a suspicion of mauve—and a white eye. An invaluable variety, especially as a cut flower*







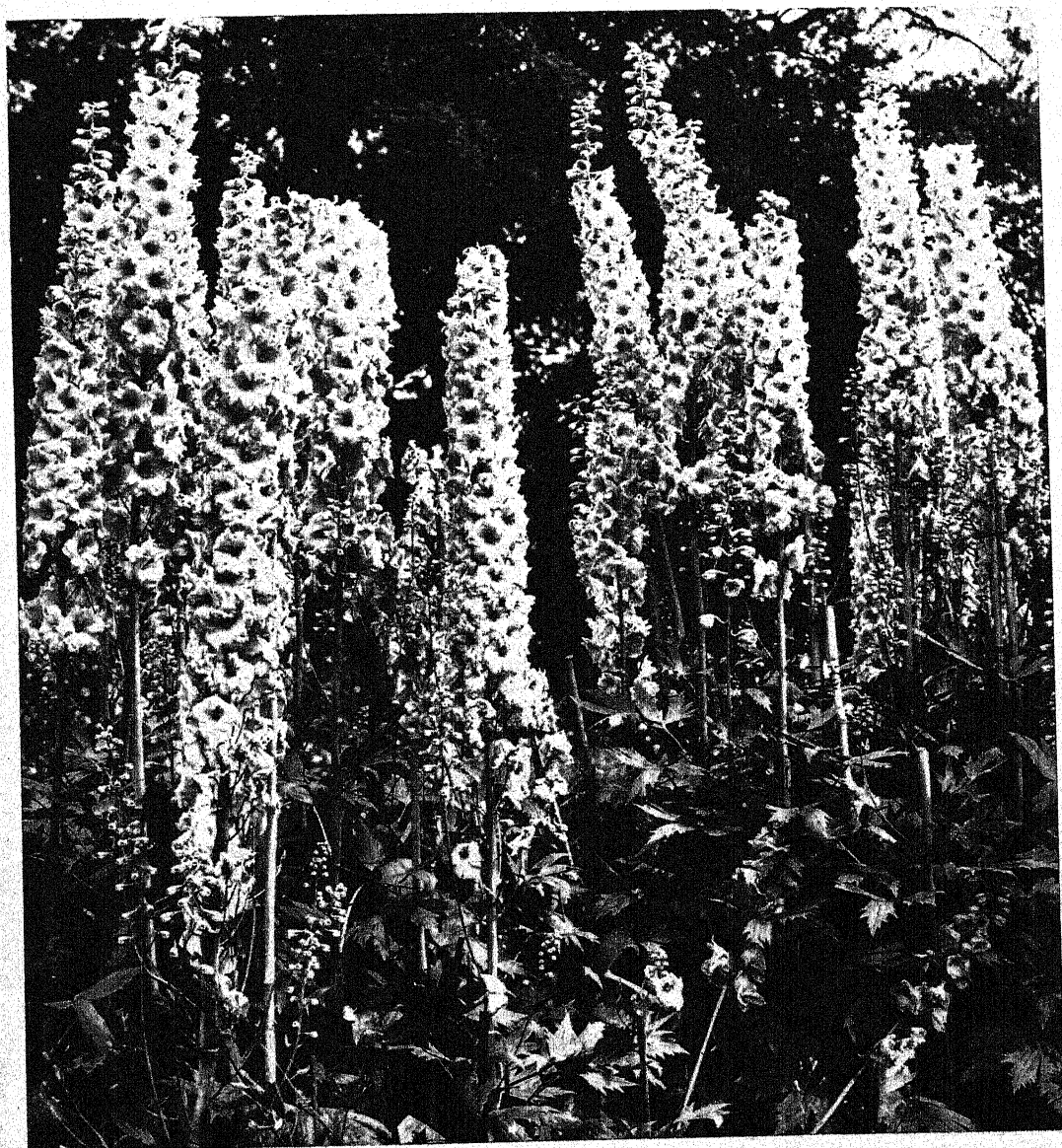
*Left: Delphinium Frederick Grisewood. Deep blue self-colour with a small white eye. Centre: Delphinium Mauveen. A medium shade of mauve with a white eye. Top right: Delphinium W. B. Cranfield. The flowers are blue and purple-mauve, and lightly spaced on a large spike. One of the older varieties but still among the best. Bottom right: Delphinium C. H. Middleton. Medium blue flushed pale mauve with a cream eye*



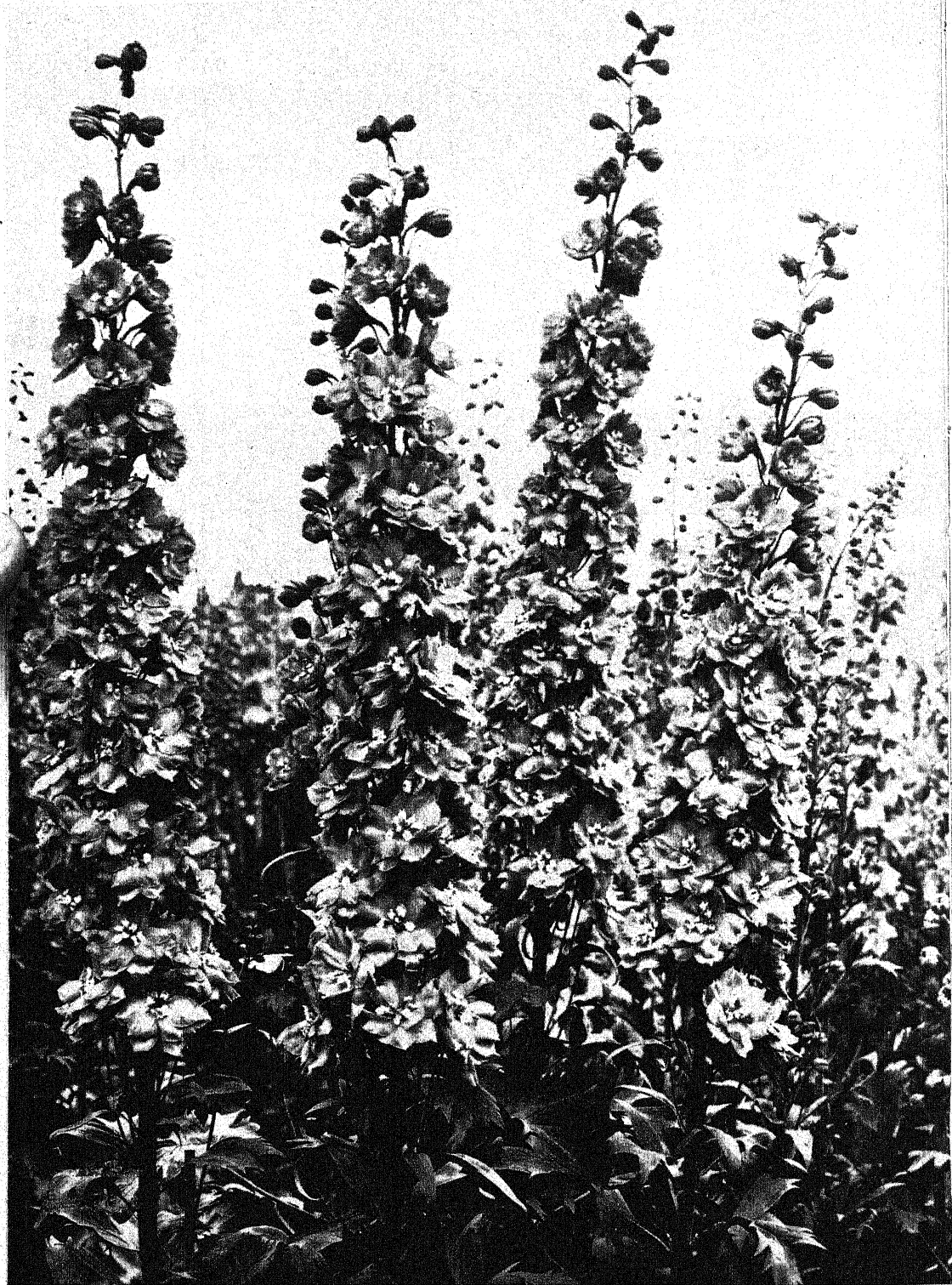
Outer, left: *Delphinium Beau Nash*.  
An early flowering variety with large  
flowers of a deep purple and dark  
mauve and a black and gold eye. A very  
compact plant

Left: *Delphinium Dolores*. Pale blue  
and mauve with a black eye. A good  
garden plant

Below: Well placed groups of *Del-*  
*phiniums* cannot fail to command  
admiration in any garden as they  
provide every conceivable shade of blue  
and mauve unattainable in any other  
garden plant







*Delphinium Lady Teresa. A deep rosy-purple with a black eye. The spikes are large and well formed. An excellent variety for both garden and exhibition*

## DELPHINIUMS

A question often debated is the number of years that Delphiniums should remain without being moved, divided, or replanted, and it is impossible to provide a definite answer. When they are being grown for exhibition purposes, new plantations of young cuttings are made every two or three years but commercial growers found during the war and post-war periods, when, owing to shortage of time and labour it was impossible to move them so frequently, that really first-class spikes were produced on plants which had been established for six or seven years. There is no doubt whatever that when they are planted among other subjects in the herbaceous border, it is quite unnecessary to disturb them as long as they continue to produce healthy shoots, but the number of shoots which are allowed to develop on each plant should be limited to not more than four or five. The thinning should be carried out quite early when the growths are between six and ten inches high and the weakest shoots are, of course, those to be removed. They should only be cut out with a sharp knife as other semi-dormant "eyes" may be attached to them, and the plant damaged if they are carelessly pulled or broken off. However, should established plants become unhealthy it is advisable to lift them in the spring, cut out any decayed portions, and replant the shoots which have healthy roots attached to them. These will generally make good flowering plants in the following season particularly if the flower buds are picked off as soon as they appear in the first year.

The quality of the flowers on old-established plants will obviously be considerably improved by fairly generous feeding so a moderately heavy dressing of a compounded manure should be applied in February and a further dressing will prove beneficial in April or early May.

Staking is an important feature of Delphinium culture and should be carried out as soon as the plants are about six inches high. It may be wise the first year to tie each spike to a separate stick or cane, but established plants are best secured by placing three canes triangularly around each plant with string or "fillis" fastened around them. This method permits the long spikes to sway with the wind within the limits of the sticks and thereby considerably reduces the possibility of damage.

When flowering has finished, the spikes should be cut off to the top of the foliage, and, for the first season at least, seeds should not be allowed to mature; seed-bearing tends to weaken the plants. In subsequent years, however, a few pods on each plant may remain for seed formation, but overproduction of seeds will undoubtedly weaken the plants.

At the end of the season when the foliage has died down, the stems should be cut to within a foot of the ground and all decayed or semi-decayed leaves removed. The soil immediately around the crowns of the plants should also be

removed and replaced with a heavy covering of sharp sand or ashes as a protection against that most destructive of all garden depredators, the slug. The failure of Delphiniums to over-winter has caused many growers anxious moments and has elicited varied comments and conclusions, but investigation usually provides ample evidence of the slug's devastating activities. Few Delphiniums will survive a severe infestation and even if they do, the plants are left so weakened that those spikes which are produced prove small and unworthy. Such a condition is easily prevented by adopting the method already described.

Delphiniums are fortunately not heir to any virulent diseases. Under conditions of extreme drought mildew will sometimes appear—particularly if the aerial humidity is high at the same time. A dusting of sulphur will help to keep this within reasonable bounds. The presence of mildew need not be taken too seriously, for, while it undoubtedly weakens the plants to some extent, it is rarely, if ever, fatal. Its intensity varies according to variety. Some are particularly susceptible while others are almost immune and the present tendency among some raisers of new varieties is to be quite ruthless in discarding all plants which exhibit a propensity to mildew. This is without doubt a wise policy which will eventually give rise to a race of mildew-resistant varieties. Some American strains of Delphinium are especially prone to mildew and this fact may be one of the causes of their inherent weakness when grown in Europe.

Provided the soil in which Delphiniums are planted has been well prepared, they should not require feeding with artificial fertilizers in the first season but established plants on the other hand will greatly benefit from their use. Any well-balanced, compounded soluble fertilizer will be suitable and it should be applied when the plants are six to nine inches high. The quantity to use will depend on the analysis of the fertilizer and the amount of unexpended manure in the soil, but the aim should be to get plants with deep-green foliage when fully expanded (young growth is often pale in colour) and stems which are not easily dented when squeezed. Lime is essential to good Delphinium culture.

#### BELLADONNA DELPHINIUMS

These comprise a collection of a dozen or so named varieties of dwarf plants with branching habit, the flowers of which are, in the main, single. Because of their dwarf habit they are chiefly used near the front of the border where taller varieties would be quite out of place. Their elegant flowers, which range in colour from the palest to deep blue and even pink, are most useful for cutting. They produce basal shoots very readily and will therefore provide several crops of flowers each year. In fact, from early summer to late autumn they are rarely without flowers. Slugs, however, seem particularly fond of these Delphiniums, so they should be well protected against them throughout the year. Staking



# DELPHINIUMS

presents little trouble as a few spray-twigs placed around each plant will keep them upright. No herbaceous border should be without a few groups of these charming and useful varieties.

## A SELECT LIST OF DELPHINIUMS

| <i>Variety</i>       | <i>Colour</i>               | <i>Colour of Eye</i> | <i>Flowering Season</i> | <i>Height in feet</i> |
|----------------------|-----------------------------|----------------------|-------------------------|-----------------------|
| Maid of Bath         | Pale Blue                   | White                | Late                    | 5½                    |
| Heavenly Blue        | "                           | White                | Mid.                    | 6                     |
| Monaveen             | "                           | White                | Mid.                    | 5                     |
| Crystal              | "                           | White                | Early                   | 5½                    |
| The Artist           | "                           | White                | Mid.                    | 5                     |
| Charles F. Langdon   | Mid-blue                    | Black                | Early                   | 6                     |
| Blackmore's Blue     | "                           | White                | Mid.                    | 5½                    |
| Blue Rhapsody        | "                           | Black                | Early                   | 6                     |
| Blue Lagoon          | "                           | Brown                | Mid.                    | 5                     |
| Frederick Grisewood  | "                           | White                | Mid.                    | 6                     |
| Mrs. Frank Bishop    | "                           | Black                | Mid.                    | 5                     |
| Royalist             | Dark blue                   | White                | Mid.                    | 6                     |
| Valentia             | "                           | White                | Mid.                    | 6½                    |
| Startling            | "                           | White                | Mid.                    | 6                     |
| Sue Murrell          | "                           | Brown                | Mid.                    | 5½                    |
| Blackmore's Glorious | Pale mauve                  | White                | Mid.                    | 5½                    |
| Jennifer Langdon     | "                           | Black                | Early                   | 5                     |
| Margaret Farrand     | "                           | White                | Mid.                    | 5½                    |
| Melora               | "                           | White                | Mid.                    | 5                     |
| Beau Nash            | Purple                      | Black and gold       | Mid.                    | 5                     |
| Lady Teresa          | "                           | White                | Mid.                    | 6                     |
| Purple Prince        | "                           | White                | Mid.                    | 5                     |
| Bridesmaid           | Pale blue and<br>pale mauve | White                | Mid.                    | 6½                    |
| C. H. Middleton      | "                           | Sulphur-white        | Late                    | 5                     |
| Mrs. Newton Lees     | "                           | White                | Early                   | 5                     |
| Sylvia               | "                           | White                | Mid.                    | 5½                    |
| Lady Eleanor         | "                           | White                | Mid.                    | 6                     |
| Lulu Sanders         | "                           | Black                | Mid.                    | 5                     |
| Mauveen              | "                           | White                | Mid.                    | 6                     |
| George Bishop        | "                           | Sepia                | Late                    | 5½                    |
| Pyramus              | Dark blue and<br>mauve      | White                | Late                    | 5                     |
| W. B. Cranfield      | "                           | White                | Mid.                    | 5                     |
| Roy Helling          | "                           | White                | Late                    | 6                     |

## *The Adaptability of Hardy Flowers*

By T. HAY, C.V.O., V.M.H.

OUR POST-WAR WAY OF LIFE HAS FORCED UPON MOST GARDENERS CONDITIONS FAR from pleasant or satisfactory. The cost of labour and of the many and very varied items the most modest garden demands have greatly increased, and there seems no immediate hope of any abatement of these conditions.

A new garden outlook is now a necessity; it may mean a loss of elegance, beauty, neatness and other features we have long been accustomed to and part with regretfully.

While every garden, large or small, will have its own problems, there is much we can generalize upon and which will apply to all gardens. The decorative aspect of the garden which includes its tidiness and cleanliness is the most laborious and costly, and it is in this direction that there is most prospect of overcoming many of our present-day difficulties. A much freer use of plants that are of a permanent character is the obvious solution for all those who must limit time and cost in garden upkeep. The more extensive planting of flowering trees and shrubs and perennial border plants which are lacking in so many gardens would add distinction and character beyond anything possible by the present-day fashion of planting much of the garden with subjects that last but a short season. It is true that a border of hardy perennials has been termed both costly and exacting in its demands for time and attention, while staking its great variety of plants is both wearisome and to many a very difficult and disagreeable task. It is, however, quite possible to plant, and enjoy, a border of considerable extent without the use of stakes. A careful perusal of any list of border plants that require no stakes will show that they are more numerous than the tall growers which will not stand erect without stout supports, and the complete elimination of those back row giants makes more easy the planting of a border of great charm and novelty.

A visit to any nursery where hardy plants are a speciality will reveal that there are many sturdy dwarf-growing varieties and species among the *Helianthus*, *Rudbeckias*, *Delphiniums*, *Michaelmas Daisies* and other tall growers which we think of as plants that must have stout stakes. A glance at the great array of showy border plants that require no stakes is quite surprising, and the list will include many we still consider choice and rare.

There are the *Erigerons*, all attractive; the sturdy, neat *Heleniums*; *Geraniums* in great variety; many *Campanulas*; the new, erect-growing *Pyrethrums*,

#### THE ADAPTABILITY OF HARDY FLOWERS

Aquilegias, and many species of Veronica. No plant adds more colour to the hardy flower border than the modern Phlox. Many of the most beautiful Paeonies are stout and erect, and there are numerous species of showy Penstemons, Salvias, Lupins, Chrysanthemums, Astilbes, Monardas, Oenotheras, Geums, *Scabiosa caucasica*, Sidalceas, Trolliuses, Hostas, and Centaureas, all of which take care of themselves. A lengthy list of plants of special merit could be compiled, all of which stand upright—*Echinacea* The King, *Sedum spectabile*, *Malva Alcea*, *Kiringeshoma palmata*, *Aster Thomsonii*, the Acanthus, Phlomis, the modern varieties of Montbretia, and a host of others.

It is suggested that in a border of stakeless herbaceous plants a little closer planting is an advantage—let one plant help to support its neighbour; the effect is both pleasing and surprising; it will excel the tied and staked border and put an end to the use of posts, stakes and string, however skilfully they have been used in the past. The occupants of the border can be allowed to grow undisturbed and as Nature intended them, and the average garden will lose nothing of its attraction by omitting the extra tall and other plants of untidy habits.

#### PLANTS TO LEAVE UNDISTURBED

Certain species of herbaceous plants increase quickly and these will require frequent dividing, but if this particular type is attended to when necessary, the great majority will go on for several years before replanting of the whole border is due.

Then there is a certain number that resent disturbance and take long to recover; among these are the perennial Statice, all the varied forms of *Anemone japonica*, *Echinacea*, the Paeony, Helleborus, certain forms and varieties of *Verbascum* that have a tap root; established plants of the *Malvacea* should also be left in peace as long as possible. The lovely *Trillium* family seems to prefer fixity of tenure; the handsome *Trollius* increases and forms fine clumps if left to its own devices, and the splendid *Eryngiums* that adorn the border and delight the bees resent any interference.

I have seen a magnificent breadth of *Dicentra spectabilis* that had flourished unmoved for twenty years; it grew under an old Apple tree and the leaves from the tree was all the manuring it ever had.

The stately *Antholyza ethiopica* grows in greater splendour as the years pass, and prefers the first anchorage given to it. After ten years of fixed tenancy, clumps of the brilliant *Lychnis chalconica* are still moderate in size and are still strong and striking when in flower, and what has been termed one of the most perfect of all border plants, *Coreopsis verticillata*, never looks better than when left to form broad masses.

The Kniphofias, or Red-hot Pokers, are often slow and difficult to establish,

and are only at their best when they have enjoyed a long lease of their original site. Clumps of *Aquilegias* are much more elegant when they are several years old, and the modern tendency to make this fine race more of a bedding plant does not do it credit.

The observant cultivator will soon become acquainted with the many border plants that act differently on his soil and once a year take steps to check the spreaders or less meritorious, and to encourage those that appeal to his taste and adorn the border.

#### CARPETING PLANTS

There are in many gardens areas, large and small, where the more vigorous growing border plants can be of great service, and not only of decorative value but of labour-saving qualities. Many are by nature of their root system and close carpet of growth the most perfect of weed destroyers, and should be more used for carpeting under trees and in shrubberies where weeds cause much annoyance and labour. Among the most perfect plants for this purpose are the strong-growing species of *Epimedium*; when once established none of our annual weeds can survive, and as a check on Couch Grass and Ground Elder it has no equal.

While the *Epimediums* enjoy full sun they thrive also in partial shade, and are most attractive both in leaf and flower. Their persistent foliage turns a rich bronze during autumn, and survives an ordinary winter. This foliage can be cut over in spring when the new growths are just appearing, and these speedily replace the old ones. For planting steep slopes in sun or shade, the well-known *Hypericum calycinum* is a fine carpeter and showy when in flower; it is an effective weed eradicator.

Another plant that can also be recommended and is worthy of much more attention is *Iberis sempervirens*—the Evergreen Candytuft. In late May it is a white mass of flowers and in a very few years after planting, a single plant will keep clear two yards of ground and look attractive all the year round.

It is also surprising what the annual spread of many hardy Heaths can be. Nearly all the named varieties of *Erica carnea* spread and quickly cover the ground and keep weeds in check. They can be used with great effect under trees if the overhead foliage is not too dense and in thinly planted shrubberies. They are particularly happy along the margins of shrub borders. Most of them object to lime, but to this there are exceptions. Among the hardy Heaths, *Erica darleyensis* can be safely planted where most of the *Ericaceae* refuse to flourish.

There are many other plants of spreading habit that are useful both as cut flowers and for keeping the ground clear of weeds. The Pinks are very valuable for this purpose, and the ordinary strains both with double and single flowers are very strong growers and more easy to grow than the choice sorts. They are propagated by cuttings and layers.



## THE ADAPTABILITY OF HARDY FLOWERS

I saw recently a low, roughly built retaining wall covered with Balm of Gilead, *Melissa officinalis*. It made a perfect and fragrant covering, but this old favourite can be planted on the flat and can be kept lawn-like if cut with a scythe or hook.

The fragrant Camomile is also a good carpeting plant, and gives out its fragrance the more freely the oftener it is walked upon. The small-leaved forms of Ivy, many of which have finely variegated and coloured foliage are splendid carpeters but must be planted in full sun if their variegation is to be enjoyed. They soon revert to green leaf if grown in shade.

In addition to the dwarf plants named, many border plants with more showy flowers can be associated with shrubs if not overcrowded; nor do some of them object to shrub and tree roots curtailing their livelihood. The Paeony and the Hellebore family often flourish under such conditions. *Iris sibirica* in all its forms is most accommodating in this respect. *Malva Alcea*, *Artemisia lactiflora*, the Hollyhock—which was once described as the only herbaceous plant that had any effect on the landscape—are great additions to the shrub planting. Other plants for this purpose are the Montbretias, Monardas, and the double-flowered forms of Helianthus.

A selection of plants for this purpose ought to be made from those that flower late in the summer after the shrubs have done their duty for the season, and those that require no stakes are the ideal.

## HARDY FLOWERS FOR CUTTING

The border of hardy perennials, owing to the great variety of plants it can accommodate, though of the most modest dimensions, never fails to provide cut flowers and over a long season. The growers for market have from long experience selected those most suitable for their purpose, and these have been planted on a great scale. They must have brilliant colouring, be long-lasting and good travellers.

The erect growing Pyrethrums are largely grown and are among the first of the border plants to flower in the open. The Paeony is, perhaps, one of the most popular of hardy plants grown on the big scale. The Trollius is increasing in favour, but its long-lasting qualities are not of the best. Many varieties of *Chrysanthemum maximum* are very suitable for cutting, particularly those new sorts with double flowers or with several rows of petals—these are more lasting than the older forms.

Great areas are now devoted to *Scabiosa caucasica*, one of the most popular of all border plants, and *Alstroemeria aurantiaca* and the newer "Ligtu Hybrids"; Anemones of all the groups into which they are classed are largely grown in the southern counties, but the owner of a well-stocked border need not confine his

# GARDENS AND GARDENING

choice of flowers for the decoration of his home to those that are long-lasting, easy to pack, and that travel well by road and rail; his bowls and vases can be filled with a procession of hardy flowers from May until frost ends their activities. Many sorts that are rarely seen in the shops are very useful when cut in the early morning or late evening, and their stems deeply plunged in water for a few hours before they are arranged in bowls and vases.

The life of those that are known to fade quickly when cut can often be prolonged by a drastic removal of the foliage; this can be replaced with foliage of other plants or by non-flowering growths of the same plant.

We are now advised to cut all flowers with a knife so that they are not cut straight across but on the slant; this is of advantage, particularly when the stems rest on the bottom of the receptacle.

The following lists will assist readers in their choice of plants for different purposes.

## PLANTS REQUIRING NO STAKES

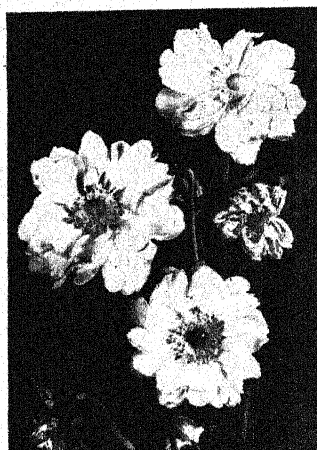
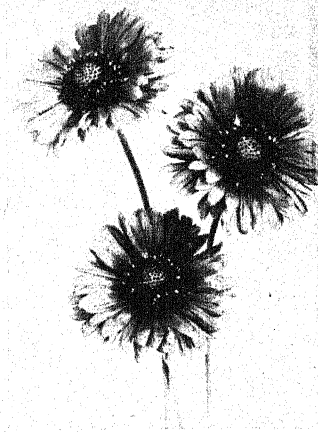
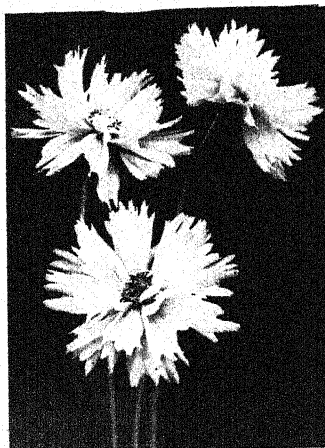
| Name   | Height in feet | Time of Flowering | Colour                  |
|--|----------------|-------------------|-------------------------|
| <i>Acanthus mollis</i>                       | 2              | July              | Purple and white        |
| <i>Aquilegias</i> in variety                 | 1½-2½          | May-June          | Blue, red, yellow       |
| <i>Aster Thomsonii</i>                       | 1½-2           | July-Oct.         | Pale lavender, blue     |
| Asters in variety                            | 3-4            | Autumn            | Blue, pink, white       |
| <i>Campanulas</i> in variety                 | 3-4            | July              | Blue, white             |
| <i>Centaurea dealbata</i>                    | 3              | June-Oct.         | Rose                    |
| <i>Chrysanthemums</i> in variety             | 3-4            | Aug.-Oct.         | Yellow, bronze, red     |
| <i>Delphiniums</i> in variety                | dwarf          | June-July         | Blue                    |
| <i>Dictamnus Fraxinella</i>                  | 3-4            | June              | Purple and mauve forms  |
| <i>Dierama pulcherrimum</i>                  | 4              | July-Sept.        | Deep pink               |
| <i>Doronicums</i>                            | 2½             | April-May         | Sulphur-yellow          |
| <i>Echinacea The King</i>                    | 2½             | Aug.-Oct.         | Reddish-purple          |
| <i>Eremurus</i> in variety                   | 5-7            | May               | Yellow, pink, rose      |
| <i>Erigeron mesa-grande</i>                  | 2              | June-Sept.        | Violet-blue             |
| <i>Geranium grandiflorum</i>                 | 1½             | May-July          | Violet-blue             |
| <i>Geums</i> in variety                      | 1½-2           | May-July          | Scarlet, orange, yellow |
| <i>Heleniums</i> in variety                  | 2½-5           | July-Oct.         | Yellow, bronze, crimson |
| <i>Hemerocallis</i> in variety               | 2              | June-July         | Yellow, orange          |
| <i>Hostas (Funkias)</i>                      | 2              | June-July         | Violet-blue, white      |
| <i>Iris</i> , tall bearded                   | 2½-3½          | May-June          | Wide range              |
| <i>Kniphofias</i> in variety                 | 3-5            | June-Sept.        | Orange, scarlet         |
| <i>Liatris pycnostachya</i>                  | 4              | July-Sept.        | Rose-purple             |
| <i>Limonium (Statice) latifolia</i>          | 3              | July-Aug.         | Lavender-blue           |
| <i>Lupins</i> in variety                     | 3-4            | May-June          | Wide range              |
| <i>Lychnis chalcidonica</i>                  | 3              | June              | Scarlet                 |
| <i>Lysimachia punctata</i>                   | 3              | June              | Yellow                  |
| <i>Lythrum Rose Queen</i>                    | 4              | July-Aug.         | Bright rose             |
| <i>Malva Alcea</i>                           | 2-3            | June-Sept.        | Rosy-pink               |
| <i>Monarda Cambridge Scarlet</i>             | 3              | June-July         | Scarlet                 |
| <i>Oenothera fruticosa</i> var. <i>major</i> | 2              | June-Aug.         | Golden-yellow           |
| <i>Paeonies</i> in variety                   | 2½-4           | May-June          | Pink, crimson, white    |



*Russell Lupins*

*The work of the late George Russell opened up a vista of colours and colour combinations hitherto unimagined among Lupins*





Above, centre: *Coreopsis grandiflora* Perry's variety. Excellent for cutting; it bears large, semi-double rich yellow flowers on stiff, strong stems

Above, left: *Scabiosa caucasica* var. Clive Greaves. Still the favourite rich blue perennial Scabious; ideal for cutting and for the mixed border

Above, right: *Gaillardia Wirral Flame*. As its name implies, this variety is a rich shade of red, large-flowered and makes a splendid cut flower

Left: *Anemone japonica* Margarete. A recent introduction; the flowers are semi-double, deep pink, enhanced with a yellow eye; 3½ feet high



*Doronicum Miss Mason*. A very free-flowering variety; the sulphur-yellow flowers are the more welcome as they appear in April and early May



*Helenium Wyndley.* The very large, rich yellow flowers are suffused with orange. It grows to a height of about  $2\frac{1}{2}$  feet



*Helianthus Monarch.* The most handsome of perennial sunflowers; the large rich golden flowers appear in August and September. Reaching a height of 7 feet, it is a plant for the back of the border

5807  
19

120253





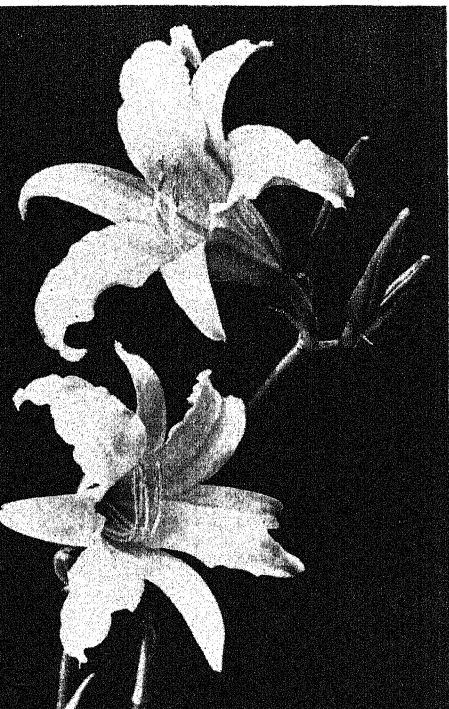
*Aquilegias*

*There are many fine strains of Aquilegia containing a wealth of shades. Modern varieties are notable for their very long spurs*



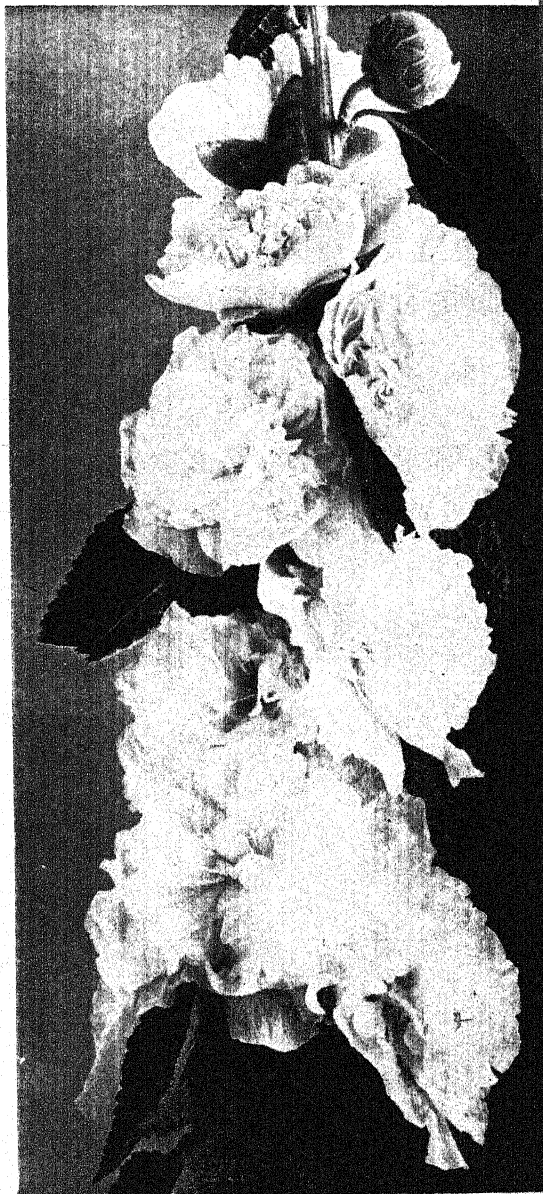
*Below: Hollyhocks*

*No border, and certainly no cottage garden, is complete without some of the single or double Hollyhocks*



*Hemerocallis George Yeld*

*A very free-flowering variety, bearing large, open, rich orange flowers*



*Left: Physalis Alkekengii*

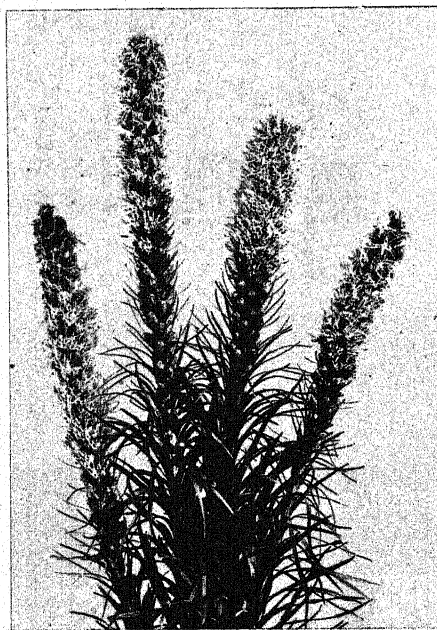
*The ever-popular Chinese Lantern notable for its orange scarlet bladder-like calyces*



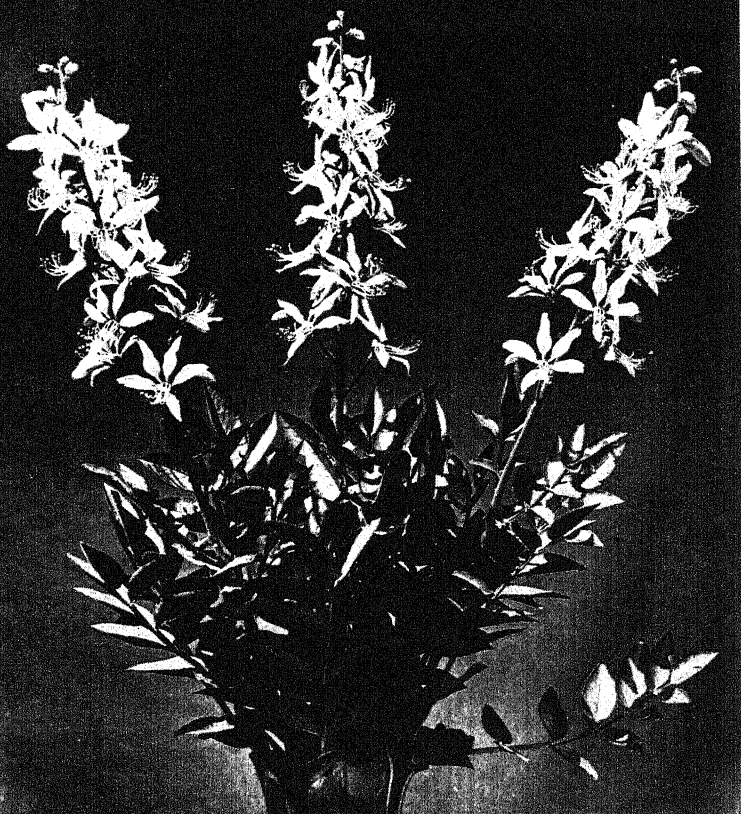
*Polygonum lichiangense*. An attractive plant, with long-lasting white flowers. About 3 feet in height and not rampageous like some of the *Polygonums*

Below left: *Liatris pycnostachya*. The rosy-lilac flowers are distinguished by the fact that they open from the top of the spike downwards—a rare characteristic

Below right: *Alstroemeria aurantiaca*. The best-known of the "Peruvian" Lilies. The flowers are vivid orange carried on stems 3 feet high. The modern hybrids of *A. Ligtu* are gaining rapidly in popularity

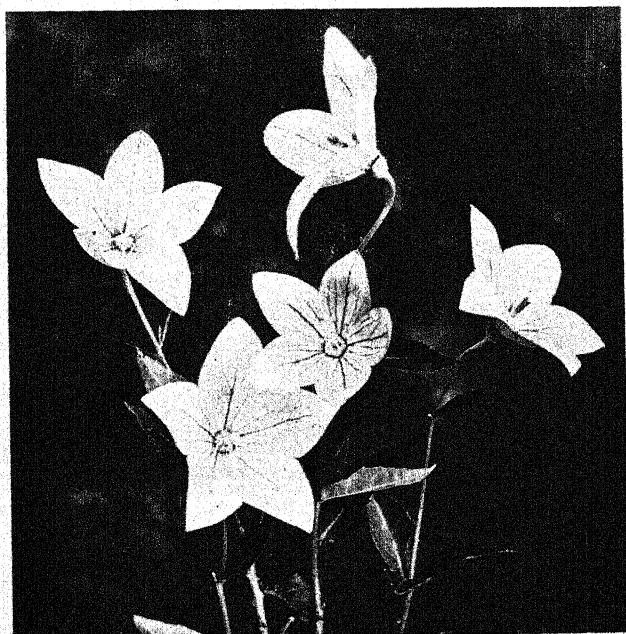


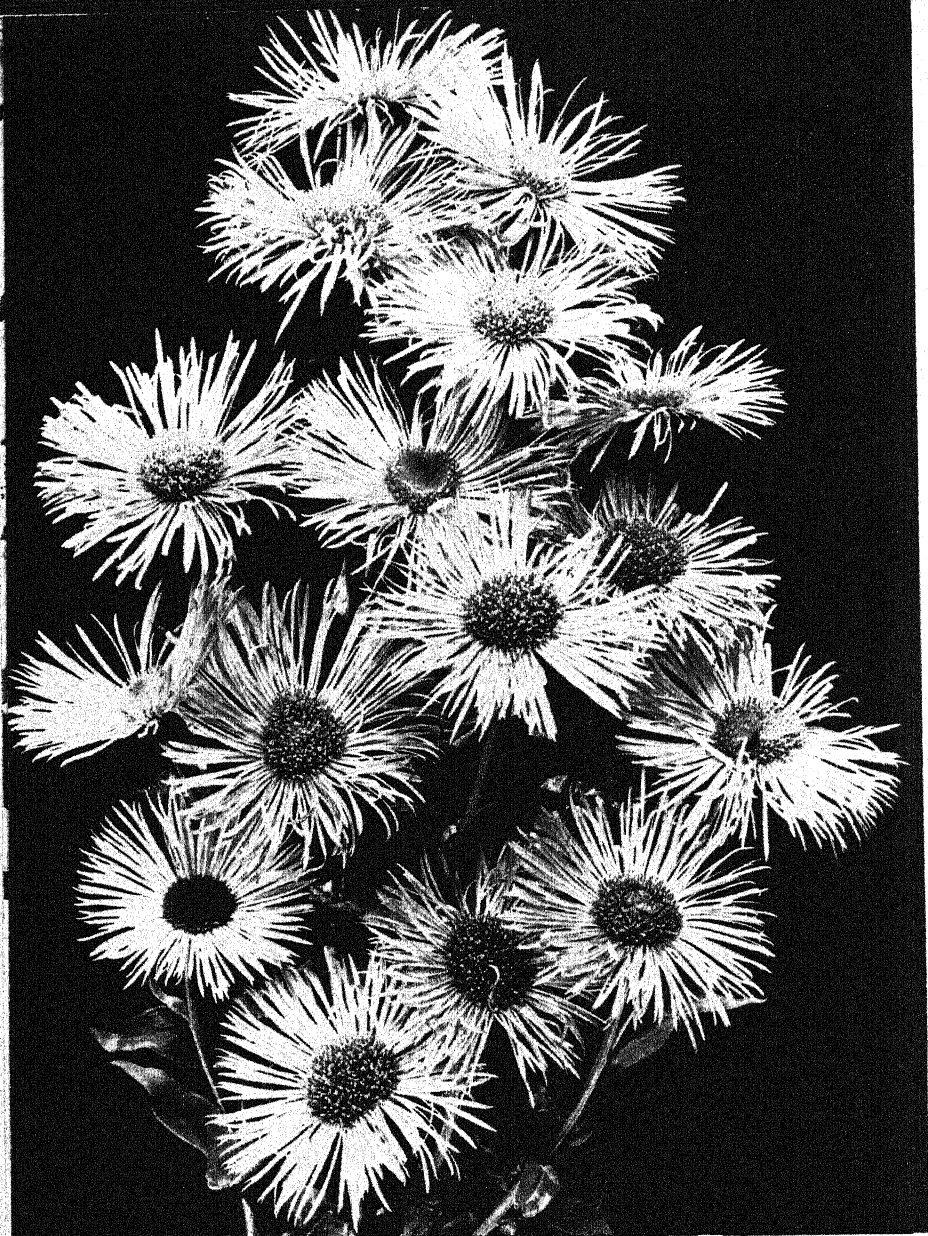




*Dictamnus Fraxinella*. The Burning Bush. This species bears purple flowers: there are also white and mauve forms

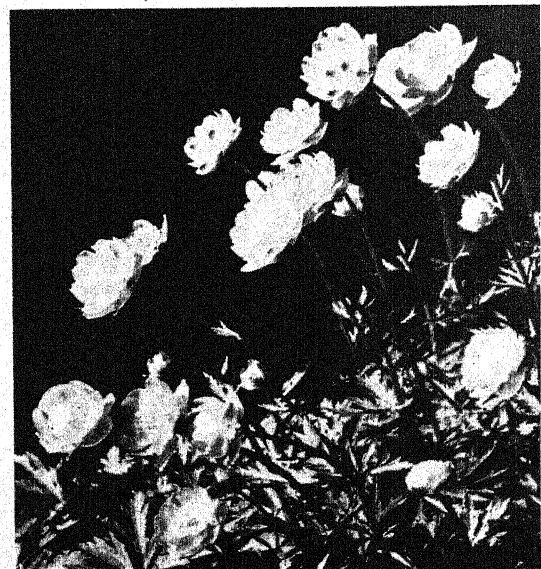
Right: *Romneya Coulteri*, popularly known as the Californian Poppy; flowers of pure white, about four inches across, with boss of golden anthers  
Below: *Platycodon grandiflorum*. A very long-lived plant when once established. Of neat habit, it needs no stakes and produces light mauve-purple flowers





*Erigeron mesa-grande*. A handsome plant; the large, branched heads carry a generous mass of deep lavender-blue flowers enhanced by a golden disc

Right: Globe flowers. The varieties of *Trollius*, ranging from pale sulphur-yellow to deep orange, are magnificent for a damp corner in sun or shade





# THE ADAPTABILITY OF HARDY FLOWERS

## PLANTS REQUIRING NO STAKES—continued

| Name                               | Height in feet | Time of Flowering | Colour                        |
|------------------------------------|----------------|-------------------|-------------------------------|
| Phlox in variety                   | 2-5            | June-Sept.        | Yellow, purple                |
| Phlox decussata in variety         | 2½-3½          | July-Aug.         | Scarlet, purple, pink, white  |
| Platycodon grandiflorum            | 2½             | June-Aug.         | Purple-blue, blue and white   |
| Pyrethrums in variety              | 2½             | May-June          | Carmine, crimson, pink, white |
| Rudbeckia californica              | 2              | Aug.-Sept.        | Golden-yellow                 |
| Scabiosa caucasica in variety      | 3              | July-Nov.         | Blue, white                   |
| Sedum spectabilis                  | 1              | Aug.-Sept.        | Bright rose                   |
| Sidalceas in variety               | 3-4            | July-Sept.        | Pink, crimson                 |
| Trillium grandiflorum              | 1              | May               | White                         |
| Tritonias (Montbretias) in variety | 1½-2           | Aug.-Sept.        | Vermilion, yellow, scarlet    |
| Trollius europaeus in variety      | 2              | May-June          | Orange, yellow                |
| Veronica spicata                   | 2              | July              | Blue                          |
| Veronica virginica                 | 4              | July-Aug.         | White                         |

## HARDY FLOWERS FOR CUTTING

| Name                                      | Height in feet | Time of Flowering | Colour                        |
|---|----------------|-------------------|-------------------------------|
| Alstroemeria Ligtu hybrids                | 3              | July              | Pink, orange                  |
| Asters (Michaelmas Daisy)                 | 2½-5           | Sept.-Nov.        | Blue, rosy-pink, white        |
| Chrysanthemum maximum<br>var. Esther Read | 2              | June-Aug.         | Double white                  |
| Coreopsis auriculata var. superba         | 3              | June-Aug.         | Golden yellow                 |
| Delphiniums in variety                    | 3-5            | June-July         | Blue, mauve, white            |
| Gaillardias in variety                    | 2-2½           | June-Oct.         | Crimson, tangerine            |
| Gypsophila Bristol Fairy                  | 3-4            | July-Aug.         | Double white                  |
| Heleniums in variety                      | 2½-5           | July-Oct.         | Yellow, orange, bronze        |
| Limonium (Statice) latifolia              | 3              | July-Aug.         | Lavender blue                 |
| Paeonies in variety                       | 2½-4           | May-June          | Pink, crimson, white          |
| Pyrethrums in variety                     | 2½             | May-June          | Carmine, crimson, pink, white |
| Scabiosa caucasica in variety             | 3              | July-Nov.         | Blue, white                   |
| Tritonias (Montbretia) in variety         | 1½-2           | Aug.-Sept.        | Vermilion, yellow, scarlet    |

## CARPETING PLANTS

| Name                        | Height in feet | Time of Flowering | Colour        |
|-----------------------------|----------------|-------------------|---------------|
| Anthemis nobilis (Camomile) | ¼              | June-July         | White         |
| Epimedium macranthum        | 1              | May-July          | White         |
| Erica carnea                | ¾              | Feb.-March        | Pink, carmine |
| Erica darleyensis           | 1              | Nov.-April        | Rosy-pink     |
| Hypericum calycinum         | 1-1½           | June-Aug.         | Bright yellow |
| Iberis sempervirens         | 1              | May-June          | White         |
| Polygonum vacciniifolium    | ½              | Aug.-Sept.        | Rose-pink     |

## Paeonies

By JAMES KELWAY

OF THE HARDY, PERENNIAL, HERBACEOUS PLANTS WHICH FLOWER IN EARLY SUMMER the members of the Paeony family are, in my view, the most beautiful and desirable.

By reason of their habit, the form and colouring of their foliage, the infinite variety and beauty of form, colour, profusion and fragrance of their flowers, as well as on account of their extreme hardiness, vigour and ease of culture, the Paeonies must be considered the most important of all the hardy, perennial, non-shrubby plants for gardens in these Islands, and in countries with a similar climate.

The sheer loveliness of the blooms of the June-flowering varieties (as well as of the "Tree" or "Shrubby" section) is so extraordinary that attempts to describe it are often complete failures.

The delicate suavity of the perfume of most of the *Lactiflora* section would alone place them in the first rank of garden flowers. In the house their fragrance is especially agreeable; for unlike that of some flowers it does not become overpowering or unpleasant in confined quarters.

Paeonies may be divided roughly, from the amateur gardener's point of view, into three sections:

(a) The June-flowering varieties of *P. lactiflora* (called until recently *sinensis*, *albiflora* or "Chinese Paeonies"). This is the most important section for the average kind of garden.

(b) The various herbaceous *species*. These flower in May or earlier; certain of them are eminently desirable.

(c) The varieties of *P. suffruticosa* (*P. Moutan*) the shrubby or "Tree" Paeony, and hybrid varieties between it and the yellow flowered, shrubby *P. lutea*.

To those who have only met with May-flowering Paeonies such as the well-known "Old Double Crimson" of gaudy colouring and not very pleasing perfume, the June-flowering varieties of *P. lactiflora* will be an astounding revelation.

## PAEONIES

### THE IMPORTANCE AND PLACE IN THE GARDEN OF (a) THE JUNE FLOWERING VARIETIES

Whilst Paeonies are important by reason of their great and varied beauty in colour and form and on account of their perfume, they have other valid claims. One of these lies in their permanence when once planted, another in their power of endurance through hardships such as extremes of climate and neglect, under which many other so-called "hardy" plants would fail in part or would altogether succumb.

And the importance of the Paeony as a cut flower is immense. The blooms are so beautiful, so fragrant, so large, on such long stiff stalks, and lasting so long when cut, that they are worth growing for house decoration for this purpose alone.

And even if Paeonies bore no flowers it is reasonable that they should be given a place in the garden for the sake of their handsome foliage, which in many cases assumes brilliant colouring in the autumn.

### WHERE, WHEN AND HOW TO PLANT

Paeonies may be planted in any part of the garden where there is direct sunshine during some part of the day and a soil of average consistency and good depth not too near the roots of large trees.

For the best effect it is probably advisable, where possible, to plant in groups of three or five or more of the same variety, rather than singly. And unless it is intended to take up and plant elsewhere every other plant in three or four years' time, plenty of room should be given from the beginning. Paeonies are a permanent investment and individual plants will form quite large clumps with reasonable encouragement.

For this country I consider that the very best time to move and replant is in September or October or if this is not possible the first convenient date in the autumn or winter after the ground has been made ready, but not later than the end of March.

The best plants to obtain are roots of two, or at the most three, years of age. These go straight ahead and become established and flower satisfactorily sooner than old clumps or divisions of large clumps which take longer to send out fibrous roots and to re-establish themselves.

When planting herbaceous Paeonies, whether species or garden varieties, a hole for each plant should be dug one or two feet deep and one and a half feet across. Where convenient it would be well, in the summer beforehand, to have the whole bed or border trenched, or at any rate deeply dug, and enriched by the incorporation of well-rotted farmyard manure, compost, or humus of some kind.

The herbaceous kinds should be planted so that the crown of the plant which produces the stem buds will not be more than one and a half to two inches beneath the ordinary surface level after the soil has settled.

It is quite useless to give them a protective covering in winter; it may be positively harmful through the lessening of the aeration of the soil without the beneficial action of the frost and snow, to both of which they are accustomed in their native habitat.

To compose a list of the most desirable of the many named varieties of herbaceous June-flowering Paeonies requires a long acquaintance with them. Not only the beauty of the flower, but the habit of growth, free-flowering quality and the consistently high standard of each individual kind in successive seasons have to be considered.

I have been fortunate in having been in actual personal touch with an immensely varied collection during a long life-time. Those I mention at the end of this article have stood the tests of time and competition.

#### (b) MAY-FLOWERING PAEONIES

The various herbaceous species of *Paeonia* which flower in May or a little earlier are many. *Officinalis* is the largest section, especially if we include in it *P. peregrina*, *P. arietina*, *P. cretica*, *P. decora*, *P. paradoxa*, all of which seem to be sub-species or varieties of it. *Officinalis* itself is represented throughout England, particularly in cottage gardens, by the "Old Double Red" (*P. o. var. rubra plena*).

Of other May-flowering herbaceous species, two are outstanding; *P. Mlokosewiczii* and *P. Wittmanniana*. Both are imposing in leaf and flower, and they add yellow, a colour rare in herbaceous Paeonies. And there is the interesting small-flowered species *P. Veitchii* and its variety *Woodwardii*.

#### (c) SHRUBBY PAEONIES

##### COMMONLY KNOWN AS "TREE PAEONIES"

The Tree Paeony is one of the noblest shrubs available for beds in the garden or for the border; it is extremely hardy, being subject to at least 80° below zero Fahr. in its native country. It flourishes in Britain in the open garden under the simplest treatment in almost any kind of soil. The smallest specimen will flower in the most astonishing manner, bear magnificent blossoms often one foot across and will increase in size until it becomes a large shrub carrying a very large number of flowers. The flowers are unsurpassed in beauty or in range of colour, from the most delicate tints to those of strongest splendour, by those of any hardy plant or shrub.

The preparation of the soil and the cultivation is that recommended for



## PAEONIES

herbaceous Paeonies. One preference is perhaps a sandy soil well mulched from time to time, irrespective of whether it is an acid or limy one; but it must be well drained, for stagnant moisture is fatal; they do especially well in a bed raised a foot above the surrounding level.

It is also very easy to grow Tree Paeonies in a cold greenhouse; good sized plants put into pots in the autumn will give flowers as beautiful as those produced in the open air.

The following are lists of the Paeonies of the various sections which I would myself plant as being amongst the best available. The June-flowering varieties are given in colour groups. Single flowered are marked S. Semi-double SD. Japanese type J. The rest are double flowered.

VE—beginning to flower the last week of May

E—beginning to flower early in June

M—in flower in mid-June

L—in flower late in June

VL—lasting to early in July

fr.—more than usually fragrant

FF—profuse bloomer

T—markedly tall in growth, four to five feet.

D—not normally exceeding two and a half feet

ac—notable for attractively coloured foliage in late summer

The name and date in parentheses are of the raiser and the year of introduction.

### JUNE-FLOWERING

#### WHITE

ALICE HARDING (Lemoine 1921).—A lovely tint of palest amber on white ground, turning wholly white. Very large and massive but occasionally semi-double. Incurved centre. Delicately beautiful. Vigorous and tall. EM.

BARONESS SCHROEDER (Kelway 1888).—Pale flesh-white tinted cream, turning snow-white. Rose type. Very large. Handsome foliage. Rose scented.

S. CHRISTINE KELWAY (was Baby Kelway) (Kelway 1901).—Flesh-white, quickly turning pure white. Red carpel. Very large, substantial and of perfect form. Broad petals of velvety texture. In the first rank of single whites. EM.

DUC DE WELLINGTON (Calot 1859).—White, cream-white at centre turning white. Bomb-shaped full double, but sometimes develops narrow central petals. EM.

S. DUCHESS OF SUTHERLAND (Kelway 1894).—Lovely pale shell-pink changing to creamy-white; pink carpels; golden glow at centre. Very large substantial chalice-shaped flower. Tall. EL. ac.

DUCHESSE DE NEMOURS (Calot 1856).—Light canary yellow to pure white. Green carpels. Incurved crown type. Medium sized flower, sometimes large. Fine foliage. Extremely sweetly scented. Useful as a cut flower. VFF. EL.

FESTIVA MAXIMA (Mieliez 1851).—Pure icy white with an occasional red blotch. EL.

JAMES KELWAY (Kelway 1900).—Blush-white changing to milk-white with golden glow at centre. Very large flowers of exquisite quality and perfect form. Very fragrant. Specially useful as a cut flower. Vigorous and rather tall. Good foliage. Second only to Kelway's Glorious for perfect beauty. FF. EM. Has been recorded as producing as many as sixty blooms to one plant. "One of the grandest Paeonies known. It has grown for me an upstanding vigorous stem between four and five feet in height, crowned with a group of five or six flowers of most enchanting beauty. It has a quality of petal which has no equal. It has the colour of untouched white, and a habit of remaining only half open for a long time, when cut in the bud and kept from direct sunlight." *From "Paeonies in the Little Garden", by Mrs. Edward Harding of U.S.A.*

KELWAY'S GLORIOUS (Kelway 1908).—The finest of all double white Paeonies. Ravishingly lovely. Gleaming white with creamy glow in the depths. Crimson streaks outside the guard petals. Wonderful perfection of form; deep funnel-shaped centre of incurving petals with broad widely spread rings of surrounding petals. Immense flower six to seven inches across. Strongly scented of roses. Plant of medium height of first rate habit with stout stems and dark green foliage. The flowers are freely produced and last well when cut. ML.

LAURA DESSERT (Dessert 1913).—Creamy white guard petals with bright canary yellow centre. Snow white with primrose base to petals when mature. Large full double. Medium height. The yellowest double herbaceous Paony when young. Fr. FF. EM.

MISS SALWAY (Kelway 1887).—White tinged lilac with sulphur-white centre; turns pure white. Fine shape, globular crown type. Scented. Very lovely. EL.

PRIMEVÈRE (Lemoine 1907).—Blush-white with bright lemon-yellow petaloid centre; changes to milk-white. Large. When young second only to Laura Dessert for yellowness. Sweetly scented. T. ML. ac.

J. QUEEN ALEXANDRA (Kelway 1902).—Glistening snow-white, pale yellow central boss of petaloids. EL.

S. SIR GALAHAD (Kelway) (Syn. Lady Jeune).—Blush-white to ivory white; buds deep peach colour. Red carpels. Extremely large (seven inches across) and substantial. One of the best singles. Handsome foliage. FF. VEL. ac.

SOLANGE (Lemoine 1907).—Cream or pale amber, sometimes with pale orient-pink centre. Unique colour and lovely form. Large compact globular crown type. Medium height. Dark green foliage. VL.

## PAEONIES

**S. P. WHITLEYI** (Syns. *Whitleyi major*, *The Bride*, and *alba grandiflora*).—Opens blush-white quickly turning pure white. Very large, in clusters. Needs staking. VFF. Fragrant, which is unusual amongst singles. T. VEL.

### FLESH PINK, LIGHT ROSE AND LIGHT LAVENDER

**BELLE OF SOMERSET** (Kelway).—Vivid pink changing to soft pink and then to snow white. Fine in shape and colour. Very large. Vigorous handsome plant. FF. EML.

**CLAIRE DUBOIS** (Crousse 1886).—Clear satiny rose-pink and silver. Fine incurved rose shape. Very large. Specially useful as a cut flower. Handsome dark foliage. Fr. L.

**S. ENGLISH ELEGANCE** (Kelway 1925).—Light blush-pink; buds vivid pink. Cup or goblet shaped. Extremely lovely and large; eight inches across. Medium height. One of the finest of single Paeonies. EL.

**S. E. ST. HILL** (Kelway).—Apple-blossom pink. Very large, borne in clusters. VT. EL.

**SD. GERMAINE BIGOT** (Dessert 1902).—Flesh-white shaded salmon colour, carmine flakes in centre. Very large loose crown-type flower showing golden anthers. Spicy fragrance. Good foliage. Medium height. FF. EL. ac.

**KELWAY'S QUEEN** (Kelway 1889).—Palest shell to coral pink; delicate lovely tint. White when mature. Large, globular. Sweetly rose scented. Medium height. FF. MTL.

**D. and SD. LADY ALEXANDRA DUFF** (Kelway 1891) (Syn. *Kelway's Supreme*).—Delicate gay blush-pink turning paler, with carmine blotches on some central petals. Very large broad-petalled flower borne in clusters. Side flowers single to semi-double of saucer shape with gold anthers. A most handsome plant. One of the very finest of all Paeonies for exhibition and garden, and continuously in flower. VFF. T. EL.

**MARIE CROUSSE** (Crousse 1892).—Pale satiny translucent salmon-pink to coral-pink, turning white later. A blood-red blotch in centre and red carpels. Most attractive colouring. Globular bomb type. Large, in clusters. Spice scented. ML.

**MONS. JULES ELIE** (Crousse 1888).—Light lavender-pink with silvery sheen changing to near white. Huge ball-shaped flower with very large outside petals. Varies in colour and shape as it matures. Useful for cut flowers. Stout but lax stems. VFF. Fr. EVL.

**D. to SD. PHYLLIS KELWAY** (Kelway 1907).—Rosy pink paling to white in centre. Entrancing in its delicacy of colouring. Very large loosely built flower of exquisite form and great beauty. Medium height plant. One of the very best and most attractive kinds for garden or exhibition. Fr. FF. EL.



**S. PINK DELIGHT** (Kelway).—Palest pink turning glistening white. Very lovely and very large. Dwarf Habit. FF.

**S. PINK PEARL** (Kelway 1898).—Pearly peach-pink turning white; rose carpel. Very large, broad petalled and fine. Produces a sheaf of giant flowers on a lovely plant. Medium height. One of the best singles. VFF. VEL. ac.

**THERESE** (Dessert 1904).—Translucent flesh-pink, golden glow in the depths; exquisite fresh colour. Very large massive handsome loosely built flower. Medium height with strong stems. Good foliage. Fine for exhibition. FF. EL.

**S. WILD ROSE** (Kelway 1900).—This delicate and unique variety, with its large flowers chalice-shaped as they open, is white powdered all over with small spots of peach-pink colour. The stems and buds and carpels are dark chocolate red. The older flowers are snow-white. Vigorous. Scented. VFF. EM. ac.

#### FULL PINK, ROSE, MAUVE OR DEEP SALMON-PINK

**BEATRICE KELWAY** (Kelway 1905).—Vivid pure rose outer petals, central petaloids rose, tipped and edged fawn and gold. Very striking and beautiful. A very tall vigorous plant with stout stems. A persistent bloomer. Handsome foliage tipped and edged golden-bronze when young. VT. VFF. MVL.

**J. GLOBE OF LIGHT** (Kelway 1927).—Lovely vivid pure rose colour with an enormous pure gold centre. Large. Green carpels. Flowers well the first season and does well in pots. Medium height. Vigorous. Good foliage. FF. MVL. ac.

**SD. KELWAY'S BRILLIANT** (Kelway 1928) (Syn. Una Howard).—Pure carmine-red with shadings approaching scarlet; unique in colour. Crested centre. Medium size. ML.

**KELWAY'S LOVELY** (Syn. Dorothy Kelway) (Kelway 1805).—Bright salmon-rose touched with cream-pink. Central rose coloured tuft. Very large massive handsome flower. One of the best of the full doubles. Fr. EL.

**SD. KELWAY'S UNIQUE** (Kelway 1917).—Attractive bright pure rose, orange central tuft of petaloids. Large and fine. Variable in colour and form. FF. EVL. ac.

**SD. MADAME EMILE DEBATENE** (Dessert 1927).—China-rose tinged deep pink. Superb fresh colour. Very large. Rose-form showing anthers. Tall stiff stems.

**S. NELLIE** (Kelway 1904).—Brilliant pink changing to soft pink. Flowers borne in clusters. Probably the largest coloured single. Mint-like fragrance. Vigorous. T. FF. EL.

**SARAH BERNHARDT** (Lemoine 1906).—Fine intense apple-blossom pink; each petal tipped silver. Very large handsome rose-type flower with pleasant scent. Good foliage. Fine for exhibition and as a cut flower. FF. MVL.



*Paeony White Rose of Sharon*  
*Pure glistening white with a prominent central tuft of bright yellow petaloid stamens.*  
*Unique in that the petals are so acutely reflexed. Very tall*



Left: *Paeonia humilis*. A species of the "Officialis" group with red flowers. Rather dwarf in habit. May-flowering



Above: *Paeony Kelway's Queen*. The large globe-shaped sweetly-scented flowers are delicate shell-pink, white when mature. It is free flowering. Flowers mid-season to very late



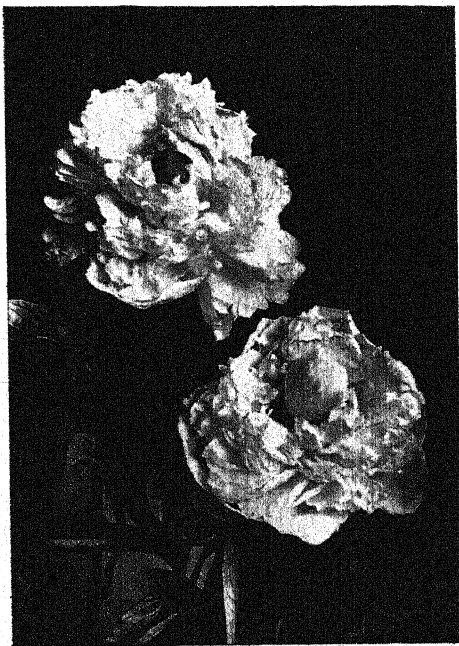
Left: *Paeony Antwerpen*. A free flowering, large single variety, clear rose-pink in colour with striking gold petaloid stamens. The flowers close at night and are exceptionally long lasting



*Paeonia Clusii*. It bears white—sometimes flushed with pink—cup-shaped flowers in mid-May



*Paeony Queen Victoria*. Creamy pink petals with a red blotch. A large and attractive flower



*Paeony Duchess of Sutherland*. The large substantial flowers are pale shell-pink, changing to creamy-white, with a golden glow at the centre. Tall





*Paeonia Emodi.* A very beautiful species found in Kashmir, bearing charming single white flowers with yellow anthers



*Paeony Lord Kitchener.* Intense maroon-red, scarlet in sunlight, with the flowers borne in clusters. The finest early red single

*Paeony Bridesmaid.* Delicate rosy-white flowers with golden stamens. Of compact habit with flowers of medium size



## PAEONIES

SD. SOUVENIR DE LOUIS BIGOT (Dessert 1913).—Very bright Bengal-rose with carmine red at base; changing to salmon-rose with silver reflex. Globe shaped. Spice-scented. FF. ML.

### DEEP CARMINE OR CHERRY RED

S. HYPERION (Kelway 1933).—Pure deep carmine-rose with white streak outside and rich golden stamens. Large, fine and distinct. Lasts well when cut. FF. MVL.

S. PRIDE OF LANGPORT (Kelway 1909).—Brilliant deep rose-pink with bright golden stamens. Pale green carpels tipped rose. Splendid huge wide spread cup-shaped flowers borne in large clusters on wiry stems. One of the very best garden Paeonies. Vigorous. A brilliant mark on the landscape. T. FF. VEL.

### DARK MAROON-RED

ADOLPHE ROUSSEAU (Dessert 1890) (Syn. Lord Avebury).—Fine lustrous maroon-red; a splendid colour. Very large. Dark foliage. T. EL.

S. LORD KITCHENER (Syn. Balliol) (Kelway 1907).—Intense maroon-red flowers; scarlet in sunlight. Borne in clusters. Dark stems. The finest early red single. VEM. ac.

MONS. MARTIN CAHUZAC (Dessert 1899).—Dark maroon-crimson with blackish sheen; a fine colour. Incurved semi-rose type, showing gold anthers. Striking landscape variety. Medium size. FF. EML. ac.

PHILIPPE RIVOIRE (Rivière 1911).—Dark maroon-red with black sheen. Fine form. Medium size. The only red Paeony with tea rose scent. Medium height. Good foliage. Wiry stems. FF. EL.

S. WILBUR WRIGHT (Kelway 1909).—Very dark blackish red; the darkest single variety. Dark stems. One medium size flower per stem borne well above the foliage; does not "burn" in strong sun. M. ac.

### MAY-FLOWERING HERBACEOUS KINDS

*(All are singles unless otherwise described)*

P. ANOMALA.—Bright scarlet-crimson, four inches across, with golden stamens. Graceful finely cut foliage. Eighteen inch stem. Flowers very early in May or the last week of April.

P. CAMBESSEDESIL.—Flowers three and a half inches across of a deep shade of true rosy-pink. Red filaments, yellow anthers. Purple-red carpels. Olive-green foliage with red stems; red veins and deep purple backs to the leaves. Ornamental reddish purple seed in pink capsules. About one and a half feet in height. End of April to May. Does best against a wall.

P. CORALLINA (Syn. mascula).—Rosy red with yellow anthers; the large pods with their black and coral-red seeds are extremely effective.



## GARDENS AND GARDENING

*P. PEREGRINA* (Syns. *byzantinus* and *Fire King*).—Rich brilliant red or lustrous rosy scarlet. Goblet-shaped strikingly handsome flowers three to four inches across. Two to two and a half foot stems.

*P. PEREGRINA* VAR. *LOBATA*.—Pure light salmon-scarlet; possibly the only *Paeony* of this unusual and striking shade; goblet-shaped. Flowering on from May into June. VFF.

*P. MLOKOSIEWICZI*.—Clear light to medium-tone yellow. Lovely flowers five inches across, with showy orange-coloured stamens. Sweetly scented. VFF. The foliage is handsome and individual; richly coloured, massive ovate leaves; stems wine-purple. The seeds, scarlet and black, are ornamental in the opening pods. Flowers in April to May. Two feet stems.

*P. OFFICINALIS* VAR. *ALBA PLENA*.—Pure white double. Two to three feet stems.

*P. OFFICINALIS* VAR. *MUTABILIS* ("Old Double White").—Attractive pale coral-pink quickly turning pure white.

*P. OFFICINALIS* VAR. *ROSEA PLENA*.—Bright pure red-rose; a very pleasing colour.

*P. WITTMANNIANA*.—Beautiful palest creamy yellow with deeper golden anthers; pale green carpels with carmine tips. Red filaments. Very large bowl-shaped flowers. Distinct habit. Two feet stems. April to May flowering.

*P. VEITCHII* VAR. *WOODWARDII*.—Small nodding rose-pink flowers. Very distinct in habit and foliage. Dainty fern-like leaves, with arching stems one foot high. End of May to June.

### "TREE PAEONIES"

The following are especially fine varieties of those available at present.

#### Section (a)

*BIJOU DE CHUSAN*.—Pure white. Large double flowers.

*COMTESSE DE TUDER*.—Bright salmon-pink lightly tinged rose.

*ELIZABETH*.—Bright rosy-red shaded fire colour. Fully double. A very old favourite.

*P. FRAGRANS* VAR. *MAXIMA-PLENA*.—Clear salmon-pink colour.

*LOUISE MOUCHELET*.—Rosy flesh shaded salmon. Very large double flowers.

*MADAME STUART LOW*.—Bright reddish salmon. Full double flowers.

*REGINA BELGICA*.—Soft rose shaded salmon. Large.

*REINE DU PORTUGAL*.—Dark red. Globular in shape.

#### Section (b)—*P. suffruticosa* $\times$ *P. lutea*

*CHROMATELLA*.—Very clear sulphur-yellow. In other respects similar to *Souv. de Maxime Cornu*.

*L'ESPERANCE*.—Semi-double flowers eight inches across with eight to ten broad, round, fringed and waved petals, pale amber-yellow to richer deeper

#### PAEONIES

shades of the same colour and spotted carmine at the base. The edges of the petals are tinted pink. The carpels are blood-red. A large tassel of golden stamens in the centre. One plant in Somerset thirty years of age is four feet high and five feet across and bears from eighty to one hundred and fifty flowers each year in May and June.

MADAME LOUIS HENRY.—Cup-shaped semi-double flowers, about six inches in breadth with six or more waved petals of bright deep carmine, buff and pink, shaded salmon and coppery yellow, with purple markings at the base of the petals and orange-yellow stamens; sweetly scented.

SOUVENIR DE MAXIME CORNU.—Every stem carries one to three very large full double flowers, six to seven inches in diameter, of perfect form, with petals of a brilliant yellow, heavily shaded orange-salmon. Very fragrant and lasting.

## *Herbaceous Plants for Edging Borders and Beds*

By JAMES COMBER, V.M.H.

THE DESIRE TO FIND SUITABLE EDGING PLANTS USUALLY SPRINGS FROM THE realization that it is essential to separate the path from the garden soil. Nothing is more disturbing than when these two mix together, forming a muddy side to the path. To avoid this all sorts of things have been tried—bricks, specially made tiles, bones, and even upturned bottles! Some of them are ugly, all most excessively formal. Dwarf shrubs such as Box and compact forms of Lavender have been used, and although these are neat, they are so precise as to be appropriate in the formal garden only. For the other parts of the garden no edgings are so beautiful as herbaceous plants, if they have been carefully chosen and planted. Think of the sweetly-scented flowers of the many varieties of Pinks, with their lovely mat of glaucous foliage throughout the season. The noble massive leaves of the Megasea are impressive during winter and summer; the veil of lavender provided by *Nepeta Mussinii*; the surf-like foam of *Tiarella cordifolia*, or the pure Gentian-blue of *Lithospermum prostratum* and its varieties are unsurpassed. If grey foliage is wanted, there is the fine-leaved *Cerastium* or the more substantial *Stachys lanata*. The variation in choice is almost infinite, and the methods of arranging them considerable.

Most of the plants root freely, and a garden boy with a line and measuring rod would find no difficulty in planting a straight line as an edging. Its formality is on equal terms with the "ribbon border", now deservedly almost forgotten, but there is a school that appreciates the informal edging of small groups of foliage or flowering plants spreading out on to the turf or path around the bed or border. Where turf adjoins the border, it means that the plant stems must be lifted and the grass under them mown with a scythe. Again in wet weather, the turf beneath dies and must be replaced. Yorkshire paving has been used with advantage in the forefront of flower borders. Plants love the warmth of the stone, and there is no need to disturb them; their natural contour is preserved and little or no staking is required. Plant edgings need not necessarily be of one variety, species, or genus, for the most satisfactory way is to plant the edging subjects in





*With the spacious border front row plants need not be dwarf, but may be larger plants allowed to fall forward in a natural manner*

*The gaily-bordered, grassy walk in Mrs. Bund's garden at Shalesbrook, Forest Row, Sussex*





*Above: Geranium Renardii. In Nature a cliff dweller, with charming pale green foliage, almost white on the underside; flowers bluish-white*



*Left: Polygonum affine is a long-lived widely-spreading perennial, providing a succession of rose-pink flower-spikes throughout the summer*

*Right: Here, Thymes, dwarf pinks, Phlox subulata and Saponarias link the borders with the stone steps*





*Right: For the front of a shady border the handsome, white flowers of *Trillium grandiflorum* are invaluable*



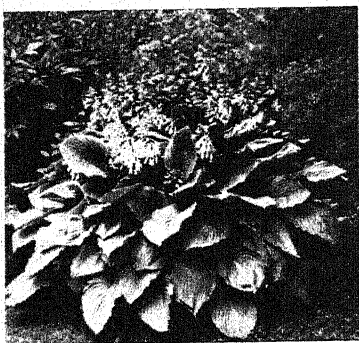
*Centre: The flagged path separating the lawn from the herbaceous border is both attractive and labour-saving*



*Below:  
A border at Buxted Park,  
Sussex, with a semi-  
formal, yet colourful edging*

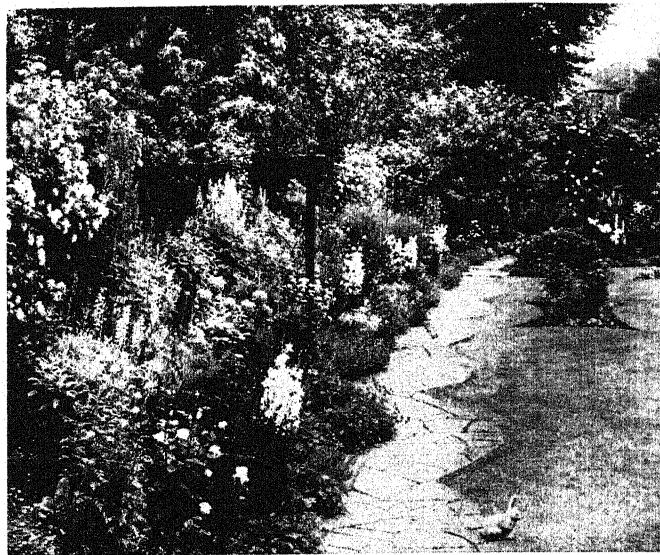






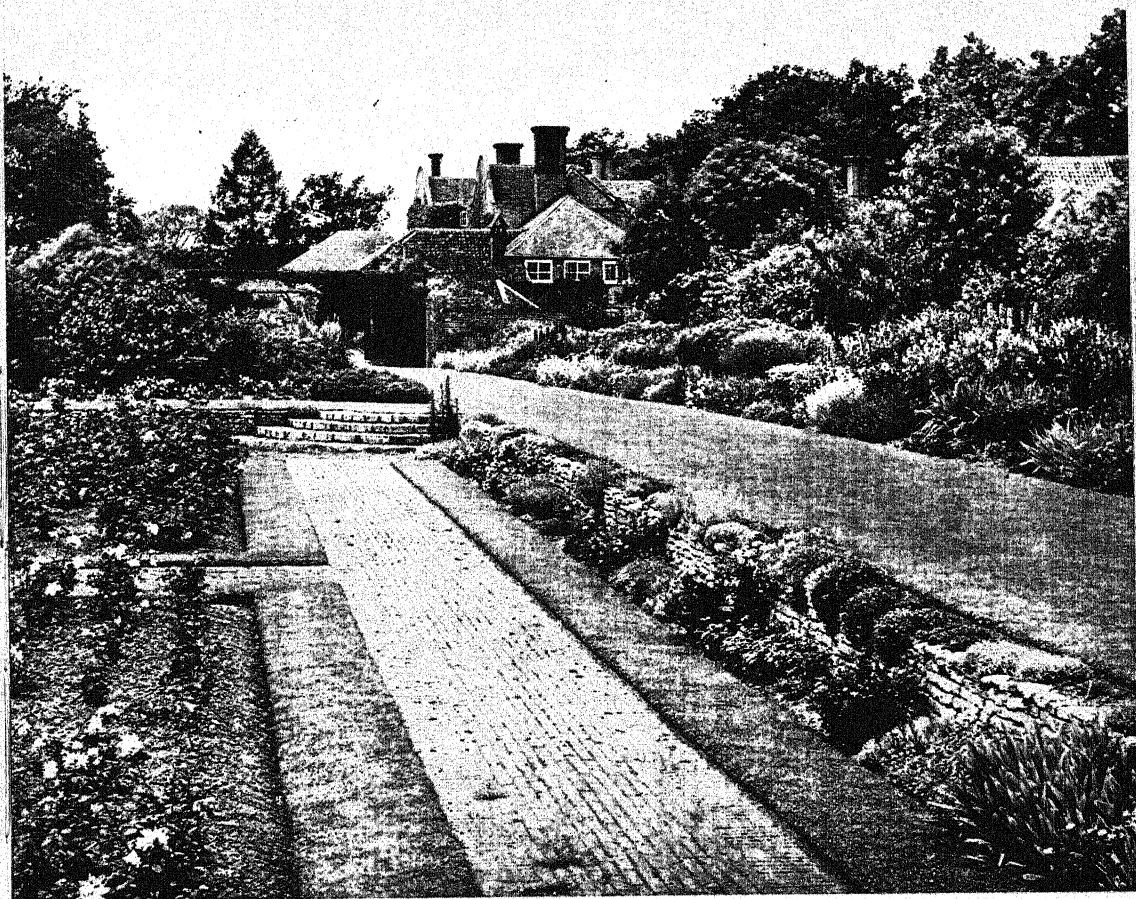
*Left: Hosta glauca (Funkia Sieboldii), a very neat plant for the front row of a border. The foliage is always attractive in spring and summer, while the lilac flowers are carried erect on 18-in. stems*

*Below: A wide stone verge permits the use of spreading plants which can break up the hard line of the border without encroaching upon the grass*



*Below: In the formal garden at Abbotswood, Stow-on-the-Wold, well-trimmed Box edging provides the right old-world touch*





*Excellent examples of low-growing plants suitable for edging or for narrow borders may be seen in this view of the gardens at Earham Hall, Norwich, Norfolk*



*Geranium armenum, a free-flowering, rather spreading species, not particular about soil or situation, with port-wine red flowers*

*Many of the more easily-grown edging plants may be pressed into service for the clothing of a bank or rock wall*



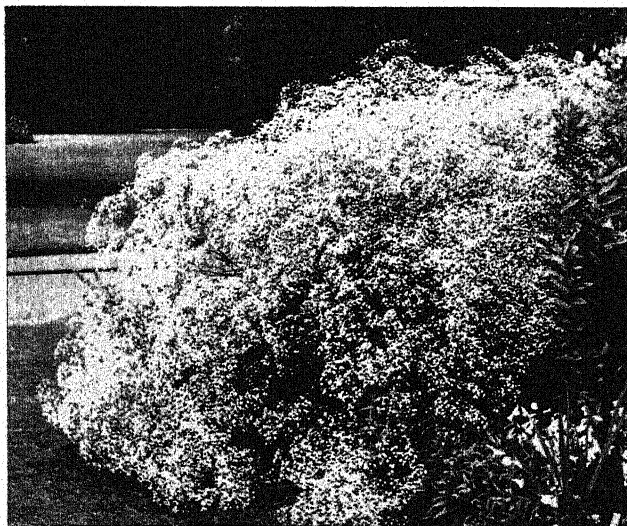




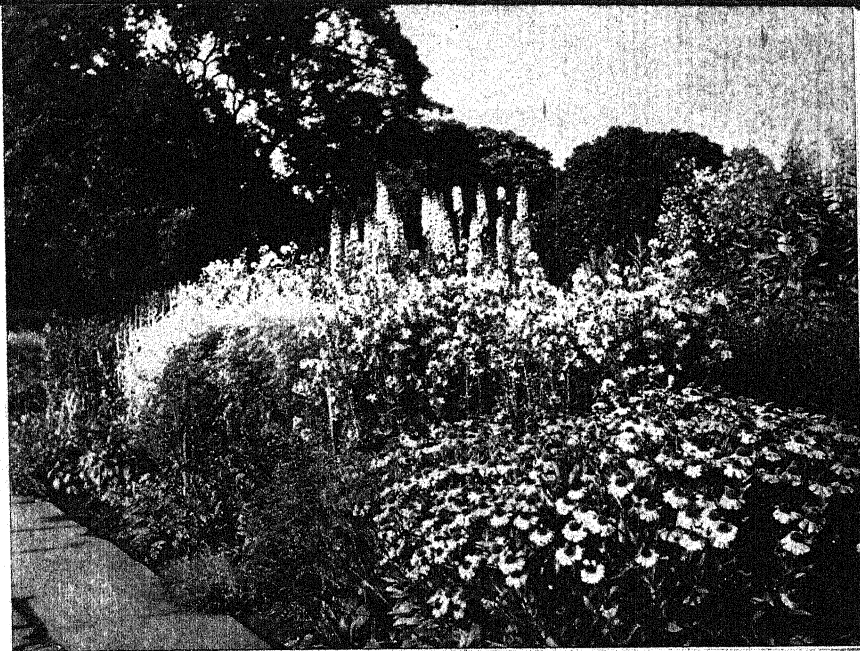
*Above: Here annual and perennial flowers are happily merged to form delightful edgings to the paved garden*

*Left: *Stachys grandiflora* is an erect-growing plant with dark green leaves and spikes of rosy-pink flowers*

*Below: Where there is ample room the large low mounds of *Gypsophila paniculata* billow out delightfully over a path or lawn*



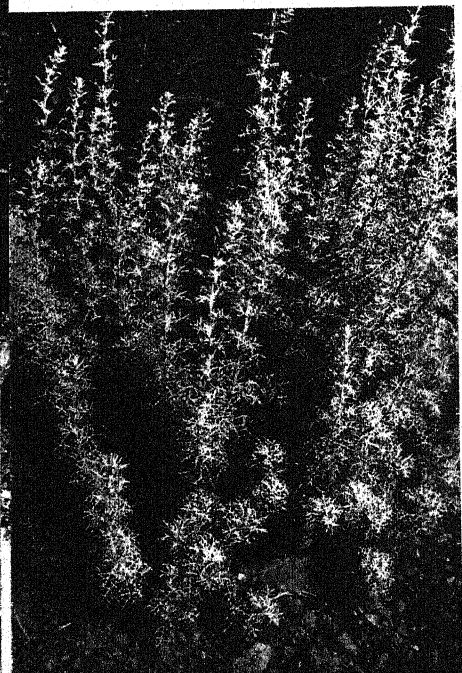




*Above: In this border at the Royal Botanic Gardens, Kew, the plants are not graded formally yet the effect is charming*

*Below: Tiarella Wherryi, the creamy-white Foam Flower, is a delightful plant for placing near a path in a semi-shaded spot*





*Above: Oenothera Fraseri, a low-growing Evening Primrose, with bright yellow flowers*

*Left: One of the most elegant of grey-foliaged plants, Artemisia canescens is ideal as a foil to gayer plants in the front of a border*

*Below: Very generous with its vivid blue flowers, Linum narbonense is a useful subject for the front of the border*



#### HERBACEOUS PLANTS FOR EDGING BORDERS AND BEDS

groups along the fringe of the border, varying their depth; some will spread forward more than others, but this informality is an asset, and breaks up the ugly line of turf edge or edging tiles between the border and the gravel path. Under such circumstances plants often flower very freely, because they can have unrestricted access to the sun and air.

During the winter some of the smallest sub-shrubs, such as the dwarf *Santolina*, *Erica carnea* and its varieties, as well as the common Periwinkle, combine with Pinks, Mossy Saxifragas and Megaseas to provide a delightful foil to early flowering shrubs.

With the advent of spring comes the flowering of a great array of edging plants. In fact, the difficulty is not so much to provide dwarf plants, as to find those which will give a variation in height. One has only to think of the lovely Aubrietias, pure white Arabis, Lungworts, Omphalodes, Primulas, Daisies, *Anemone blanda* and *A. appennina*, to imagine how beautiful the edges of spring borders and beds can be. The royal road to success is to prepare the plants during the summer, and plant them early, so that they are well established before winter sets in. Winter care consists of pressing them more firmly into the soil, as they are often lifted by frost, and poisoning slugs and such-like pests which are always waiting to devour choice plants.

Flower borders in early summer can be very beautiful, but many people fight shy of June-flowering plants in the summer borders because they go out of flower early in July and make awkward gaps later in the season. But this does not apply so much to edging plants, because most of them have ornamental evergreen foliage as well as attractive flowers. The Pinks, for example, *Tiarella cordifolia*, *Saxifraga umbrosa*, *Lithospermum prostratum* and its varieties Grace Ward and Heavenly Blue, are good examples of these dual-purpose plants. Lithospermums, incidentally, require the addition of a little peat to ordinary soils. An easy plant which flowers freely is *Campanula Portenschlagiana*, always good from June to August. Then there is the Dwarf Phlox, *Phlox subulata*, varying from white to pink and deep purple-crimson. Most of these May to July plants need good preparation of the soil, and when planted should be allowed to remain for several years if the best results are to be obtained from them. When well established, they cover the soil completely and flower profusely.

In Great Britain it is most necessary to ensure that the herbaceous borders should be in perfection from July to October, the time of year when most visitors are expected. There must be variety both in form and colouring. When planning, care must be taken that the edging plants harmonize or form pleasing contrasts with those immediately behind. All good gardening is a question of observation and experience, of gradually getting to know plants and what they will do under given circumstances; it will then be easier to select the right plant.



In some places dwarf compact plants may be called for; planted thickly they make dense edgings, very self-contained and well behaved, never encroaching unduly. Or their character may be such that the restriction needed to keep them in order leaves no appearance of mutilation.

For high summer and autumn I love edging plants with more abandon. Even those which are said to grow eighteen inches high, will, if the right varieties are selected often spread themselves forward in a flat mass, a little untidily at first perhaps, but as they turn the ends of their shoots upwards, these, combined with later growths from the base, form a splendid mass of flowers. The *Gaillardia*—often converted to an upright martyr against a stake—does splendidly when allowed its freedom in this way. The Sea Lavender, *Statice latifolia*, is an excellent plant for the front row. The light flower sprays do not hide the massive foliage below. Other plants which associate well with it are the dwarfest of the *Erigerons*, such as *Erigeron mesa-grande* and *E. Quakeress*. Asters of the *Amellus* section, if allowed freedom, make good edging plants, although if tightly staked they may attain two feet in height. There are also many of the new dwarf hybrid Asters, but they are for the most part too prim in character and perhaps better for bedding than for edging beds and borders.

Foliage plants are as important as those which flower. The *Hostas*—better known as *Funkias* or *Plantain Lilies* of Japan—are particularly valuable, especially for semi-shady parts of the border. The massive leaves of *Hosta glauca* are very shapely, their colour is a glaucous grey-green, turning to brilliant yellow in the autumn. For silvery foliage there is *Stachys lanata* (Lamb's Ears), *Cerastiums*, and *Achillea argentea*. *Crambe cordifolia* flowers in June like a huge *Gypsophila*, but if the flowers are removed early in the season, the foliage then develops nobly during the late summer months. Most of the *Sea Hollies* grow too tall for our purpose, but *Eryngium maritimum* in poor sandy soils is a most distinct plant and the silvery foliage is unique. In some soils of a chalky character or near the sea, *Border Carnations* form good edging plants. The commoner varieties produce good glaucous foliage with ample flowers in season. The *Helianthemums*, really small sub-shrubs, are splendid edging plants, loving the sunny, drier parts of the border, and growing from six to nine inches high, always trim and neat, yet covering the ground and giving a wonderful display of flowers. Their colours vary from white to pink, crimson, scarlet, orange, and yellow, and there are double and single varieties.

The desire to have a fully-filled border is quite natural, but if the best results are to be obtained, some of the choice plants must have space in which to develop during the first season. It is so easy to allow a stronger plant, having filled its own territory, to invade that of its weaker neighbour. The ability to control without appearing to do so shows the quality of the gardener; equally it might

# HERBACEOUS PLANTS FOR EDGING BORDERS AND BEDS

be said that although to plant narrow edgings of one kind of plant is a simple matter, to plan groups of plants to form a beautiful edging to a border is a skilled form of art.

Edging plants must bear a close relationship to those behind them as well as to their neighbours. Thus the sea-green foliage of the Pinks provides good company for the many shades of purple and mauve occurring in the Aubrietias while the latter form a good foil to clumps of pale lemon Daffodil Madame de Graaff. Behind these could be placed the grand forms of Honesty (*Lunaria biennis*) raised by Miss Jekyll at Munstead. In summer and autumn borders, sprawling plants Gaillardias and *Helenium pumilum* form a promontory; while the restrained foliage of the Hostas creates an inlet, in the edge, intensifying the abandon of the gayer throng.

A selection of some reliable edging plants follows.

## LIST OF EDGING PLANTS

| Name                                   | Colour                      | Season     |
|--|-----------------------------|------------|
| <i>Achillea argentea</i>               | White, silver foliage       | May-July   |
| <i>Aethionema warleyensis</i>          | Rose                        | May-July   |
| <i>Anchusa caespitosa</i>              | Gentian-blue                | Summer     |
| <i>Anemone appenina</i>                | Soft-blue                   | April-May  |
| „ <i>blanda</i>                        | Soft-blue and white         | April      |
| <i>Arabis albida</i> var. <i>plena</i> | White                       | March-May  |
| <i>Armeria</i> Bee's Ruby              | Rose                        | May        |
| „ <i>maritima</i>                      | Pink                        | May        |
| <i>Aster Amellus</i>                   | Blue                        | Aug.-Sept. |
| * „ King George                        | Bright-blue                 | Aug.-Sept. |
| * „ Sonia                              | Clear pink                  | Aug.-Sept. |
| <i>Aubrietia</i>                       | Various shades purple, pink | May        |
| <i>Cerastium tomentosum</i>            | White, silver foliage       | June-July  |
| <i>Cheiranthus mutabilis</i>           | Bronze-rosy, purple         | May        |
| * <i>Coreopsis grandiflora</i>         | Yellow                      | Summer     |
| <i>Corydalis lutea</i>                 | Yellow                      | Summer     |
| <i>Crambe maritima</i>                 | Glaucous foliage            | July-Aug.  |
| * <i>Erigeron mesa-grande</i>          | Lavender-blue               | Summer     |
| * „ Quakeress                          | Lavender-pink               | Summer     |
| * <i>Gaillardias</i> in variety        | Yellow-crimson              | Summer     |
| Geums in variety                       | Yellow-scarlet              | Summer     |
| * <i>Gypsophila paniculata</i>         | White                       | Summer     |
| * „ var. <i>flore pleno</i>            | White                       | August     |
| „ Rosy Veil                            | Flesh-pink                  | Summer     |
| * <i>Helenium pumilum</i>              | Yellow                      | Summer     |
| * „ „ var. <i>aurantiacum</i>          | Deep yellow                 | Summer     |
| * „ „ var. <i>magnificum</i>           | Clear yellow                | Summer     |
| * „ Crimson Beauty                     | Orange-crimson              | Summer     |

\* Plants over one foot high should be allowed to spread.

## GARDENS AND GARDENING

LIST OF EDGING PLANTS—*continued*

| Name                                | Colour                           | Season      |
|-------------------------------------|----------------------------------|-------------|
| *Helenium The Bishop                | Yellow-brown                     | Summer      |
| Helianthemums in variety            | White to dark crimson            | Summer      |
| Hosta (Funkia)                      |                                  |             |
| " Fortunei var. robusta             | Noble foliage                    | Summer      |
| " glauca                            | Grey-green foliage               | Summer      |
| Iberis sempervirens                 | White                            | May-July    |
| " Little Gem                        | White                            | May-July    |
| Lithospermum prostratum             | Blue                             | May-July    |
| " Heavenly Blue                     | Intense blue                     | Summer      |
| " Grace Ward                        | Coerulean blue                   | June-Sept.  |
| *Linum narbonne Six Hills var.      | Blue                             | Summer      |
| Megasea cordifolia and vars.        | Foliage                          | All seasons |
| Nepeta Mussinii                     | Lavender                         | June-Sept.  |
| Omphalodes cappadocica              | Blue                             | May         |
| " verna                             | Blue                             | May         |
| Oenothera missouriensis             | Soft yellow                      | June-Aug.   |
| Othonnopsis                         | Glaucous foliage                 | Summer      |
| Phlox Douglasii                     | Mauve                            | May-July    |
| " Beauty of Ronsdorf                | Soft-pink                        | May-July    |
| " May Snow                          | Pure white                       | May-July    |
| " subulata var. atropurpurea        | Purple                           | Summer      |
| " " " camlaensis                    | Soft pink                        | Summer      |
| " " " G. F. Wilson                  | Pale mauve                       | Summer      |
| " " " Lilac Queen                   | Lilac                            | Summer      |
| " " " Brightness                    | Rose                             | Summer      |
| " " " Vivid                         | Bright pink                      | Summer      |
| Pinks in variety (Dianthus)         | Glaucous foliage, colour various | Summer      |
| Prunella Loveliness                 | Pink                             | Summer      |
| Rudbeckia Newmanii                  | Yellow                           | Summer      |
| *Santolina incana                   | Silver foliage                   | Summer      |
| " " var. nana                       | Silver foliage                   | Summer      |
| Saxifraga umbrosa                   | White tipped pink                | June        |
| Sedum spectabile                    | Pink-carmine                     | Late summer |
| Stachys lanata                      | Silver foliage                   | Summer      |
| *Statice latifolia var. grandiflora | Lavender                         | Summer      |
| Tiarella cordifolia                 | White                            | April-May   |
| " Wherryi                           |                                  | May-June    |
| *Veronica Loddon Blue               | Blue                             | July-Sept.  |
| * " Shirley Blue                    | Blue                             | July-Sept.  |
| * " Royal Blue                      | Cambridge blue                   | July-Sept.  |
| Scabiosa caucasica in variety       | Blue and white                   | July-Sept.  |

\* Plants over one foot high should be allowed to spread.



## Hardy Carnations and Pinks

By MONTAGU C. ALLWOOD, F.L.S., V.M.H.

IT IS A COMMON QUOTATION, "A LITTLE LEARNING IS A DANGEROUS THING". But it is not dangerous so long as you realize that your learning is little and intend to add to it. Everybody has to begin with a little learning, so it is only the ignorant and foolish who consider that their little knowledge is great learning. Yet all this is simply the wisdom of gardening.

Border Carnations, as is generally known, are the old original race of Carnations, and have been cultivated in our gardens for hundreds of years, and there are few of our present-day gardens that do not possess some specimens of them. In catalogues one usually finds them grouped under the following classifications: Selfs, Bizarres, Flakes, Cloves, Picotees, Yellow and White Ground Picotees and the super hardy race of Cottage Border Carnations, which are bred from the ancient garden variety Rifleman. There is every colour to be had in the hardy Carnation, except blue.

Garden Pinks, Show Pinks and Laced Pinks (sometimes called Scotch Pinks), are old garden favourites which bloom in the early summer. The Show Pink is a more delicate and refined race, developed for exhibition purposes. It requires more careful cultivation. The origin of the Pinks is quite different from that of the Carnation, and they flourish in almost any sunny garden without special care.

The Perpetual Pinks, varieties of *Dianthus Allwoodii*, resulted from crossing the Perpetual Flowering Carnation and the Hardy Garden Pink. They flower in any sunny garden from spring to winter, and, being of mongrel origin, have a most hardy and robust constitution, growing much more quickly than the common Pink, and they are much more free flowering.

Then there are the modern *Dianthus* hybrids, such as Sweet Wivelsfield, Sweetness, Delight, Loveliness, and others which have their own distinctive charms.

### HOW TO GROW BORDER CARNATIONS AND PINKS

The native home of the wild ancestor of the Carnation, and the Pink, is on the limestone mountains of Southern Europe, and, our own Cheddar Pink, *Dianthus caesius*, grows on the Cheddar Cliffs of Somerset. It is quite easy to deduce from this information the conditions which these plants prefer. For example, lime is one of the essential parts of the plants' diet; this would be there in a perfect state for Carnations, mild and slow acting, never purging the soil of plant food. There would not be any acidity in the soil; on limestone mountains

the soil would be sweet and pure, not too rich nor poisoned with highly concentrated chemical fertilizers. The roots of the plant would just be under the soil and not deeply covered. Carnations hate to have their stems deeply buried; it brings about stem-rot for which the scientist loves to give a long name. The roots of plants growing on limestone mountains would keep cool between the crevices and the sunlight would be good. All Carnations and Pinks must have a direct light and be in a position where they can see the sun. Also the air would circulate freely around the plants, keeping the foliage dry and healthy—the appearance of Carnation and Pink leaves tells you that the bloom, or glaucescence, is their natural defence against pests and diseases. But the greatest benefit to plants growing upon the hillside would be that they grow in soil with a free drainage. These, I contend, are the essential conditions for growing all members of the *Dianthus* family really well. Similar natural conditions in the garden will keep them healthy and happy for a number of years.

Now if one considers all these natural conditions which were favourable for the wild ancestors of the Border Carnation and the Pink, so that they naturalized themselves and carried on from age to age, it should be possible to locate—and correct—the reason for any previous failure in growing Border Carnations and Pinks in a particular garden. I am sure that every obstacle can be overcome, provided one can locate the cause of previous failure. For instance, in many old town gardens, the soil is quite rich enough, often it is too rich, and there is also acidity in the soil, which is most harmful to all members of the *Dianthus* family. Limestone rock is the natural and best form of lime for all types of *Dianthus*, also for any type of soil. Anywhere in the world where we find *Dianthus* species growing in a wild state limestone rock is always in the soil itself, or else it forms the sub-soil or foundation of it; this is a remarkable fact. The old idea, which was reasonably sound, was to use crushed chalk for very light soil, old mortar rubble for soil of medium texture, and quicklime for heavy or clayey soil. But I have conclusively proved to my own satisfaction that limestone, either as dust for light soil, or as chippings for other soils, supplies lime in the perfect form, and does not purge the soil, but in some wonderful way counteracts acidity in the soil. It is noticeable that in some soils the chippings will remain present for several years, while in others they dissolve and gradually disappear. The fact is, that acidity is the mortal enemy of all *Dianthus*es, causing disease and eventually death to the plants, but as long as limestone is present in the soil, there will not be any acidity.

It has always appeared to me that limestone was the foster-mother of all the Carnation and Pink tribe, and the one essential element which has been neglected by all. You will rarely, if ever, find it so much as mentioned in the old books on the subject of Carnations.

## HARDY CARNATIONS AND PINKS

The best way of using limestone is to top-dress the soil with it. The main use of lime in the soil for Carnations is that it liberates and makes available valuable plant food in the soil, and also acts as a tonic to the plant.

We gardeners have, I am afraid, rather conservative minds and place our Hardy Carnations and Pinks all too often in beds in straight rows, but, of course, this need not be so, because ideas of combining all the delightful colours, and combinations of colour, into what we might describe as a *Dianthus* garden—composed of Carnations and Pinks—will appeal to all who have an artistic mind.

Plants which are intended to remain in the same position for two or three years should be planted not less than twelve inches apart; however, under favourable conditions, eighteen inches between the plants would not be too generous an amount of space.

The best results are obtained from early Autumn planting, failing that, planting should be done as early in the spring as possible.

During the summer months there is joy in attending to Hardy Carnations and Pinks—repeated hoeing is a luxury and a light feeding is necessary for the best results, and it must be remembered that every fertilizer is not beneficial. Many chemical fertilizers are most harmful, undermining the constitution of the plant and ruining the stock; all Carnations must have a specially compounded, slow-acting organic food, and a dressing should be given at least once a month during the growing season. This is most important in light, sandy soil.

To obtain the best blooms disbudding is necessary. The common practice is to remove the side buds round the centre crown bud, which is the best individual bloom; but the lower side buds, if left, develop into good flowers and open later; however, in the case of Pinks, it is quite optional.

The side growths or layers produced at the lower part of the plants grow rapidly during the late spring and early summer. In the case of some varieties it is necessary to support these with a plant support, or short twigs some nine inches long, to protect them against strong winds; particularly is this so in the case of plants to be grown for the second or third year.

On the Continent of Europe it is quite common to see Carnations growing upon window-sills, unsupported, so that the growths and flowers hang down, and with their beautiful foliage they look most attractive. However, there are other methods which will suggest themselves.

## PROPAGATION BY LAYERING

Layering is a natural process of propagating some classes of plants which emit roots at nodes and joints when in contact with moist earth.

In the case of Carnations and Pinks we take advantage of this phenomenon by deliberately cutting the stem through a joint.



For the layers to root well, they should not be in a hard, starved condition. Remove all the leaves from the growth except from that portion of the layer which will remain above the soil. At all times it is most essential to have a short layer to commence with—say, one with six fully-developed pairs of leaves, in the case of most varieties. The best compost is one-third moss-fibre litter or peat, one-third maiden loam, and one-third sharp, fine sand, but any light, sandy compost will suffice. Loosen the soil round the base of the plant and place the light soil or grit from 1 to 2 inches thick upon the surface. Have a sharp knife—one with a good point is best—and commence to cut the tongue two joints below where the leaves were trimmed off, allowing the knife to split the stem for  $\frac{1}{2}$  inch or so, or this can be reversed by thrusting the point of the knife through the layer and cutting downwards to make the tongue and trimming off the cut directly under the joint; then fasten down with an ordinary layering pin, taking care that the tongue is not bruised or broken while pushing it into the grit. In the event of hot weather, water in every dozen layers or so, to prevent the cut being dried, otherwise the emission of roots will be impeded.

A layer takes from a month to six weeks to root. As soon as this function has taken place, it is very beneficial to the layers to sever them from the parent plant three days or so previous to potting them. This operation should not be postponed. It is far better for the layer, when it has become moderately rooted, to be potted into a 3-inch pot or replanted than for it to be left until it has so large a ball of roots that it has to be put in a 5-inch pot; this would encourage soft, quick growth, which is just what is not wanted.

#### CARNATIONS AND PINKS IN WINDOW-BOXES

For this purpose I have obtained most satisfactory results by raising stock in summer, over-wintering the plants in a cold, well-ventilated frame, and planting into the window-boxes in March or April. If preferred, the early buds can be picked off, the plants potted into larger pots in early March, and planted in the window-boxes in May or when required.

Good results are also obtained by lifting plants from the garden in March and planting them in window-boxes, or, if the buds and flowers are picked off the plants a few weeks previous to disturbing them, they can be lifted and potted or planted in window-boxes at any period during spring and summer. Such plants will begin to flower again about a month after being disturbed.

#### DRY WALLS AND ROCKERIES

One of the greatest charms of all dwarf growing *Dianthus*es, particularly *D. Allwoodii* var. *alpinus*, with their great array of colours, is the easy way they can be successfully grown in dry walls and rockeries, and the beautiful effect obtained by growing them in this way is one of the greatest advantages of the plant.



*Perpetual Pinks, Dianthus Allwoodii, in an ideal setting with an abundance of light and air. These plants are in their second year*

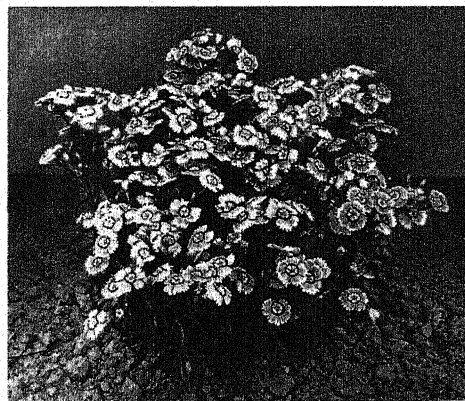




*Above: The Perpetual Pinks, Dianthus Allwoodii, in a rock garden where they seem to live for ever because of the free drainage in winter and the conditions which are those that their wild ancestors enjoyed*



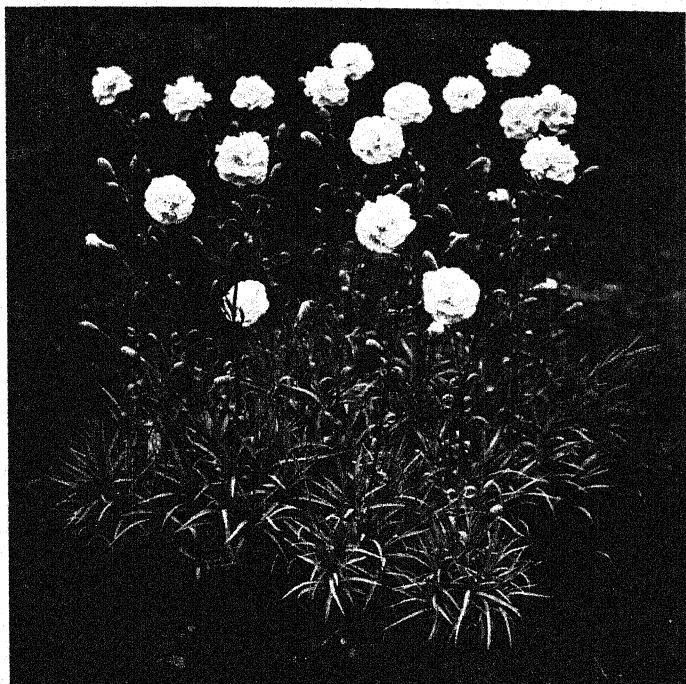
*Right: The Alpine Pink, Dianthus Allwoodii var. alpinus Dewdrop. The fascinating little perpetual-flowering Rock Pink has an extraordinary fragrance and a charm of its own, especially the tufts of silvery foliage in winter*



*Right: Dianthus Sweet Wivelsfield. Half Sweet William and half Pink. It has the virtue of being perpetual-flowering from late spring to winter*

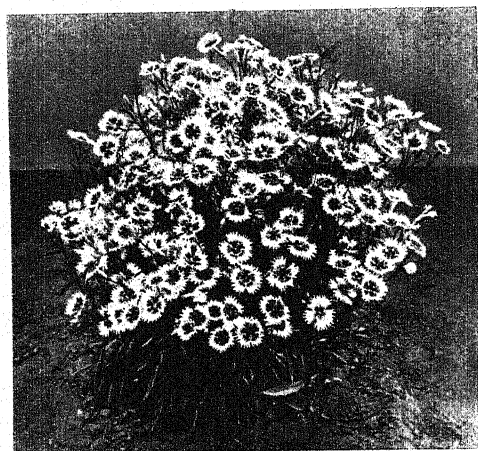


*Ordinary hardy Border Carnations in the first year of flowering; they are really at their best in the second and third years as they are so often seen in cottage gardens*



*A clump of hardy Border Carnations which are seen at their best if planted alone in a bed. The highly developed varieties do not mix freely with other flowers*



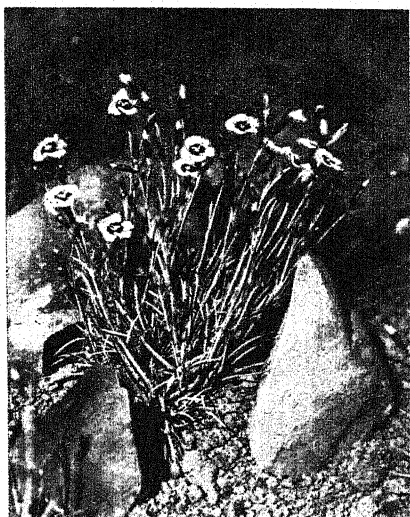
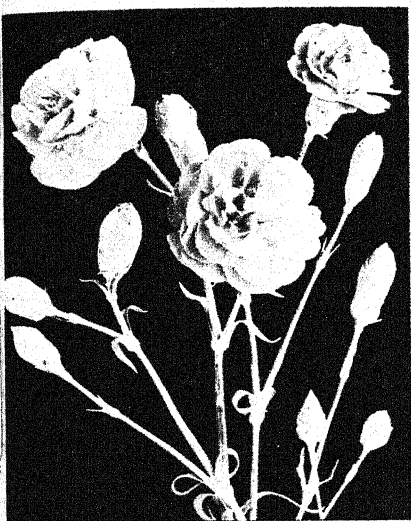


Above: Musgrave's Pink planted among rocks. This nice little Pink, white with a green eye, perpetuates the name of a great horticulturist *Dianthus Sweetness*. Half Sweet Wivelsfield and half *Dianthus Loveliness*, it has the habit of the former and the fragrance of the latter. A new and most promising plant

Below: An old plant in its fourth year—*Dianthus Allwoodii* var. *alpinus* Mist. This is an excellent illustration of the benefit of free drainage and good light that prolongs the life of any member of the *Dianthus* family



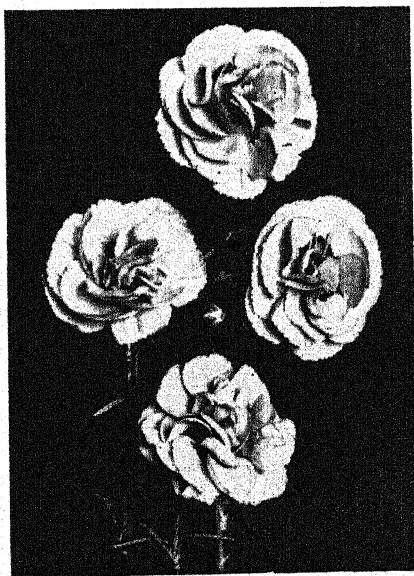
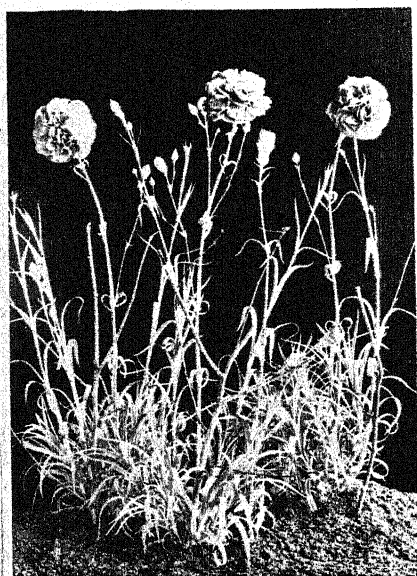




Above, left: Cottage Carnations bred primarily for garden merit and not for form of flower. The bloom has a pleasing symmetrical formation. Above, right *Dianthus Allwoodii* var. *alpinus* Goblin. In all types of Pink the best are those with a definite coloured eye on a paler back-ground

Border Carnation Butterfly. These exquisite flowers would be nothing unless they had the blending of so many colours in the one bloom

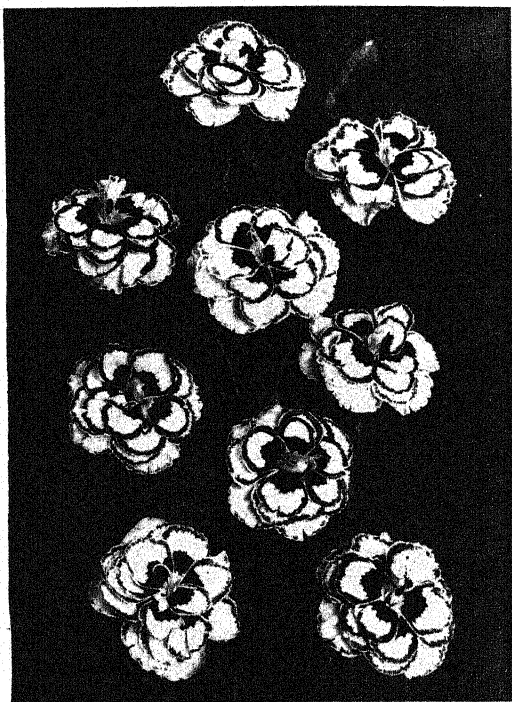
Below, left: Cottage Carnations are bred from the old English variety Rifleman, perhaps the most ancient of all Carnations because of its strong constitution. Right: *Dianthus* Show Perfection. All the exquisite beauty of the past embodied in the colouring and form of the modern strain



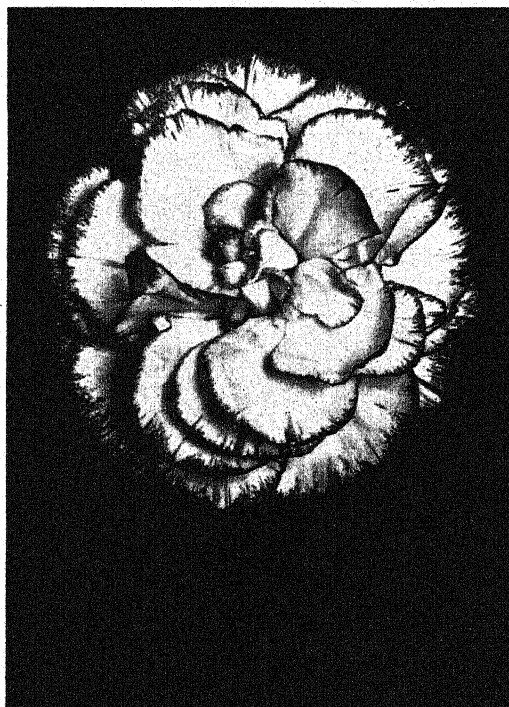




*Above, left: Show Pinks.  
A new creation embodying the merit  
of the old exhibition Pink  
with the perpetual-flowering qualities  
of the modern type*



*Above, right: Dianthus William Brownhill.  
A Laced Pink at its best.  
This choice plant has been resurrected from  
the past for present enjoyment*



*Right: Border Carnation Margaret Lennox,  
illustrating the merit of a flower  
with a ground colour  
daintily overlaid and edged with another*

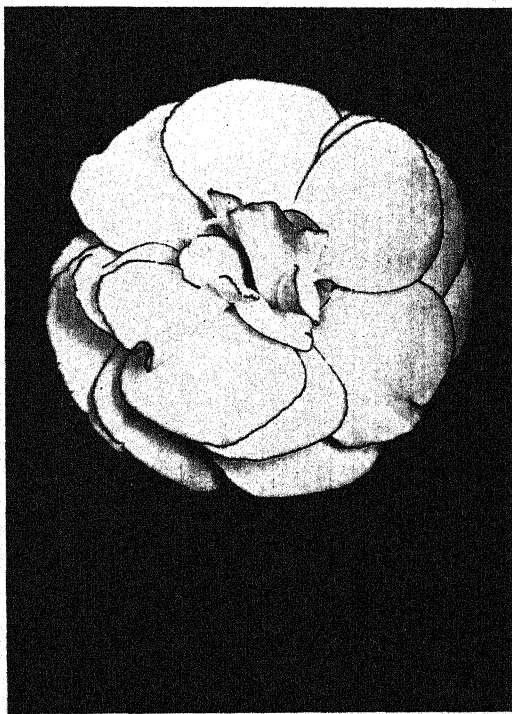


*Left: Border Carnation Egret,  
showing the beauty of form and colouring  
obtainable in the modern Carnation*

*Below left: Border Carnation Bookham Hero.  
A noble flower of exquisite form yet  
with fullness and beauty of colouring*



*Below, right: Border Carnation Eva Humphreys.  
The most beautifully coloured of all Picotee  
Carnations, white with a purple edge,  
which shows the great skill of the breeder*







*Border Carnation Bizarre*  
*This is the resurrected Elizabethan type of Carnation*  
*showing Shakespeare's streaked "gillyflower"*



#### HARDY CARNATIONS AND PINKS

Further, they are superior to all other rock plants, because they flower perpetually, if the faded flowers are removed.

It is unnecessary to go deeply into this method of cultivation, because nothing could be more simple; but the plants must receive careful watering and attention when newly planted, which is done with the best success in the autumn or very early spring, before the hot weather commences. Care should also be taken to see that the plants have sufficient soil, in the first place, to establish themselves, and the pocket or recess must have adequate drainage, otherwise the plant will become water-logged during the winter.

#### CARNATIONS AND PINKS IN BASKETS

The simplest way to grow the plants in baskets is to line the basket with moss, afterwards fill it with soil, then plant, selecting trailing varieties for the outside of the basket and compact growing kinds for the centre. I have always found it best to plant baskets in February or March, afterwards standing them in a cold frame until the plants are established; then they can be hung in practically any position, preferably with good light.

The two essential points are that the plants must never become dry, and once a week they should be thoroughly soaked and given a dressing of special Carnation food every fortnight.

#### IN POTS ON WINDOW-SILLS

Plants flourish admirably on widow-sills during the entire year, and produce an abundance of bloom from spring to winter if the few following details are given attention. Begin with young plants in the spring; pot them in 6-inch pots, or preferably three in an 8- or 9-inch pot, using rich soil; stand them upon the sill, where direct light is a great advantage. The plants should never be allowed to suffer through drought, yet to over-water them by keeping the soil perpetually saturated is equally harmful. To obtain the best results, Carnation food should be given after the plants have become established, about once a fortnight during the spring and summer.

#### THE HERBACEOUS BORDER

Pinks and Carnations should appear in every herbaceous border. The many ways to grow them will suggest themselves to any true gardener, and a clump of them is an attraction all the summer. The use of Pinks as a carpet under standard roses, or as an edging to a bed, is difficult to improve upon unless it is a bed standing alone.

#### RAISING CARNATIONS, PINKS AND DIANTHUSES FROM SEEDS

It is quite a mistake to imagine that one can get as good results from a packet of Carnation, Pink or Dianthus seeds as from named plants propagated by

cuttings or layers. In a packet of seeds there is, naturally, a very mixed collection, because only one or two *Dianthus* reproduce themselves true from seeds, and it is only the exceptional ones among them that are propagated by cuttings and sent out as novelties. These, of course, supply the standard varieties. Among *Dianthus*, in particular, the commoner types produce seeds more readily, so that the tendency is for seeds to be cheaper, and the strains get worse rather than better, because the best are shy seeders and very expensive to produce.

The various theories and systems of raising new varieties of Carnations, Pinks and *Dianthus* do not come within the scope of this article; the majority of new varieties are obtained from seeds, so that in procuring a packet of the best seeds one may be favoured by good fortune. It is never worth while sowing any other than the best seeds; the difference in cost is so small and the results so different; even from the best seeds there will be a percentage of single flowers.

It should be understood that there is not the uniformity in growth or colour among Carnation, Pink and *Dianthus* seedlings that is found in some other plants. All are delightfully various except, perhaps, in the annual *Marguerite* or *Chabaud* types of Carnation, which are all more or less uniform, but the flowers cannot be compared for quantity and keeping qualities with those of the Hardy Border varieties.

#### SOWING CARNATION SEEDS

All *Dianthus* seeds are shaped like a shell, so they are easily cracked or broken, and should never be pressed or rubbed by the hand. The common fault in sowing Carnation and *Dianthus* seeds is that they are sown too deeply. The best method is to use a shallow 6- or 7-inch pan, or a shallow box will do provided it has free drainage; whilst alternatively a 5- or 6-inch pot can be used if it is partly filled with crocks. Make up a light, sandy soil composed of two-thirds maiden loam or sweet soil and one-third sharp sand, fill the pan, pot or box to within half an inch of the top, and water with a fine roset can to firm the soil; afterwards sow the seeds about a quarter to half an inch apart and sprinkle over them just sufficient light, sandy soil to cover them, finally giving the surface a light watering. Naturally a cold frame or cloche is admirable protection. During cold, wintry weather the receptacle should, if possible, be stood where a little artificial bottom heat, not less than 45° F., can be obtained, so that germination is assisted; but seeds may be sown in a cold greenhouse or frame with good results in early spring and autumn. Place over the top of the pan a sheet of glass, and over this a sheet of thick paper to exclude the light. The glass, if possible, should be turned once or twice a day to get rid of condensation; but as soon as germination commences the paper should be removed, and two days later the glass also. When the seedlings are sufficiently strong to withstand full sun and light, the pan should be stood in a light, airy position; a shelf in the

## HARDY CARNATIONS AND PINKS

greenhouse is ideal except in summer, when it is too hot and dry. It will be readily understood that if the soil is allowed to become excessively dry the seedlings will be seriously checked, if not spoilt, while, on the other hand, if the soil is kept too wet they may damp off, so that discretion in watering is necessary.

### SEED-SOWING IN THE OPEN

For sowing out-of-doors in the summer it is necessary to provide specially prepared soil, and to assist germination by covering the seeds with glass, shaded with paper, as a protection against strong sun. It is difficult to raise any Carnation, Pink or Dianthus from seeds when sown out-of-doors unless they are covered with glass or otherwise protected by artificial means, because uncovered they are too much at the mercy of scorching suns, drying winds, heavy rains and birds.

Varieties of the genus *Dianthus* are legion and the following table is only intended to give details of the various types and sections.

| <i>Type or Genus</i>                                     | <i>Time of Planting</i> | <i>Height</i> | <i>Time of Flowering</i> | <i>Colours</i>                     | <i>Remarks Propagating</i>                              |
|--|-------------------------|---------------|--------------------------|------------------------------------|---|
| Border Carnation   | Sept.-May               | 24 ins.       | July-Sept.               | All except blue                    | Best propagated by layering and seed                    |
| Flakes, Bizarres, Picotees                               | Sept.-May               | 18-24 ins.    | July-Sept.               | Varied                             | " " "   |
| Cottage Carnations                                       | Sept.-May               | 12-15 ins.    | July-Nov.                | All except blue                    | " " "   |
| Garden Pinks   | Aug.-April              | 9 ins.        | May-July                 | Distinct                           | Best propagated by slips or cuttings in summer and seed |
| Laced and Show Pinks                                     | Sept.-May               | 12 ins.       | June-Aug.                | Refined Flower and colours         | Propagate by layering in summer and seed                |
| Perpetual Pink ( <i>D. Allwoodii</i> )                   | Jan.-Dec.               | 15 ins.       | May-Nov.                 | All colours                        | Propagate by layering and cuttings at any time and seed |
| Alpine Pinks ( <i>D. Allwoodii</i> var. <i>alpinus</i> ) | Sept.-June              | 6 ins.        | May-Nov.                 | All colours except blue and yellow | Seed and cuttings                                       |
| <i>Dianthus</i> Sweet Wivelsfield                        | May-June                | 15 ins.       | June-Oct.                | "                                  | Seed  |
| <i>Dianthus</i> Delight                                  | April-June              | 12 ins.       | June-Oct.                | "                                  | "   |
| <i>Dianthus</i> Sweetness                                | April-June              | 15 ins.       | June-Oct.                | "                                  | "   |
| <i>Dianthus</i> Loveliness                               | April-June              | 18 ins.       | June-Oct.                | "                                  | Seed. The perfume is the great attraction.              |



## *Charm of Michaelmas Daises*

By E. R. RANSON

OUR PRESENT-DAY GARDENS WOULD LOSE MUCH OF THEIR ATTRACTIVENESS IN LATE summer and autumn if they lacked the fresh and generous beauty of Michaelmas Daisies. Although these have been grown in British gardens since the days of the Stuart Kings, the more popular varieties are recent acquisitions, and few groups of herbaceous plants have shown, from the horticultural point of view, such all-round improvement in size or substance of bloom, and in range or brilliance of colour.

We have only to look at most self-sown seedlings that appear in less tidy gardens to realize how feebly their flowers compare with those of the newer named varieties.

To us all, it must be a heartening thought that Mr. Ernest Ballard, V.M.H., who for over forty years has contributed so bountifully to the development of Michaelmas Daisies, is still at work on them and is continuing with unfailing judgment to produce his long succession of marvels. Mr. Ballard has concerned himself mainly with what is known as the *Novi Belgii* section, under which have been grouped hundreds of garden varieties, many new, some still commonly grown and undoubtedly attractive though old, while others have probably vanished.

Within the present century, and mainly in the last few years, enormous advances have been made, resulting in forms with large showy blooms, each bearing scores of petal-like rays, of exquisite shape and an ever-widening range of colour for autumn display not only in gardens, but also in florists' shops and at harvest festivals.

It is the general experience that these newer varieties must be lifted every year and the young shoots replanted, while at intervals of three and four years a move is best made to fresh positions. They are true perennials and not necessarily short-lived, but they quickly tire of being long in one spot, whereas most of the older forms were rampant enough to be able to reach fresh ground.

But these present-day Michaelmas Daisies well repay such trouble. They also need thinning and if reduced to not more than two or three shoots to a stool will be easier to support by sticks put in place during May and kept secure with a little green twist.

Ruthlessness is, indeed, a simple secret of success with many Aster species and varieties; and particularly when signs of ill-health are noticed, wilted or mildewed shoots, or even whole plants, ought to be removed and burnt. To what extent old, floriferous varieties should be discarded is a matter of taste. But some of them, like Climax or its white sport, Sam Banham, still adorn a good many gardens, after half a century's existence.

In extensive gardens, beds devoted exclusively to Michaelmas Daisies and other Asters can give much pleasure, but otherwise they may be freely used in a mixed border to prolong and vary the display of colour.

From this section, as part parent, has been derived a valuable race of dwarf hybrids, from six to twelve inches tall, and astonishingly free flowering. They make the most accommodating little plants and can even be moved into their flowering positions when the buds are showing. Their colour range is not yet so wide as among their taller cousins, but it now includes many delightful varieties which can survive, or even flourish, with minimum attention.

In my opinion, there is a bright future for varieties of *Aster Novae Angliae*. They are sturdy, remarkably free from plant ailments and, unlike most other tall Asters, can generally be left to support themselves. Extreme changes of weather do not worry them, when once they have become established, though in long dry spells they obviously benefit from a mulch, which keeps the soil cool over the rather shallow roots, and helps to retain moisture. So far as I am aware, this species has shown no readiness to hybridize with other Asters. Yet seedlings from existing varieties are bearing flowers of improving size and substance, together with a widening range of purples, reds, and pinks. So far they have avoided good violet or blue shades, but the recent introduction of a white form of *A. Novae Angliae* and also of a wilding named Harrington's Pink, with its delightful glowing blooms, has extended the possibilities of attractive varieties within the species.

Shoots of these Asters are thrown up with such freedom that thinning at an early stage of growth is advisable. Those few retained will be more floriferous and will not so quickly exhaust the root system. Division of root stocks is best completed—with the aid of two forks—in February or early March, as replanted sections are slow to settle down later and may be checked by drying winds or occasional warm dry spells.

The long-lasting character of *Aster Amellus* in a fairly well-drained site of its liking is a strong recommendation, as well as its natural beauty. Yet a good deal more use might be made of this charming Mediterranean species which flowers so freely in late summer, and is at its best before most American Asters and other varieties are in full bloom. Once established, from a spring planting, it remains superbly indifferent to hot dry weather in summer or to severe frost in winter,

and there must be thousands of plants still able to give a welcome display that have not been moved for seven, eight or more years. A more frequent change is desirable, of course, both for effective weeding and also to maintain the quality of the flowers. Broken-off shoots are easily rooted in spring or plants can be divided, and this incidentally may prolong the flowering period of a variety by a week or two if some of the old plants are left untouched until another year.

King George, bluish violet, remains well known and popular, although now thirty-seven years old, and some others that continue to be treasured are still older. Sonia, rose pink, is another veteran, valuable as one of the latest forms of the species to flower.

Though the number of recent introductions has not been large, those named in the list show real improvements in colour, range, and brilliance, as well as in shapeliness of bloom which will entitle them to a prominent place in any herbaceous border.

Their average height is one and a half to two and a half feet in not over-rich soil, and they only need the support of twiggy sticks because otherwise rain is apt to weight down the large flowers to the ground.

A few vigorous and showy hybrids from *A. Amellus* have been introduced under the name of *A. Frikartii* and have been planted on a fairly wide scale. Their other parent is *A. Thomsonii*, a charming plant from the Himalayas, with a tidy habit of growth. It produces a succession of shapely blooms, very near to true blue, from late June until the autumn.

The delightful alpine and other Asters, which flower in summer, do not come within the range of this article, but I would like to urge a little more prominence for some of them in our choice of flowering plants.

From time to time, about a hundred separate species of Aster have been tried in British gardens, and over thirty of them were stocked by nurserymen before the last war. Now, unfortunately, few are available, though there must still be a demand for others that have marked individuality and make a special appeal. Only those which can still be obtained without difficulty are included in the list that follows.

What was probably the first plant to be called a Michaelmas Daisy was recently given an Award of Merit by the Royal Horticultural Society, although it has been grown in this country for about three hundred and twenty years. It is Tradescant's Aster, which bears a mass of small white flowers in October and November on neat stems four feet or more tall. These elegant shoots are often marketed earlier by nurserymen to provide foliage for mixing with other cut flowers.

Like this Aster, two others, which can be strongly recommended, are natives



# CHARM OF MICHAELMAS DAISIES

of North America. *A. cordifolius* actually enjoys shade and bears enormous numbers of small flowers in lavender, lilac, mauve, or near-blue tints. It reaches a height of three to five feet, and with its heart-shaped leaves, makes a pleasing background for Amellus varieties.

Few who have ever grown varieties of *Aster ericoides* would wish to be without their dainty elegance in a dryish sunny border where they form heath-like bushes adorned with a wonderful profusion of blossom.

Another species producing great masses of bloom is *Aster acris*, a native of European countries. But it has been uprooted from numerous gardens because of its tendency to flop unless exceptionally well staked at an early stage of growth. Plant breeders could no doubt correct such faults while preserving its unusual character.

An attractive white-flowered variety of this species was available twenty or thirty years ago and if it survives anywhere, it might well be restored to the stocks of nurserymen who might be interested.

Last of all, I must sing the praises of a rare little British wilding, *Aster Lynosyris* or Goldilocks, which can be bought with ease and must not on any account be uprooted from its all too few natural haunts. It does not usually form petal-like rays, but the clusters of golden disc florets give each plant a very unusual appearance which never fails to attract attention. This is markedly a lime-loving plant, and I find it thrives in soil mixed with a large proportion of old mortar rubble.

From the great range of the varieties now available, the following may be recommended.

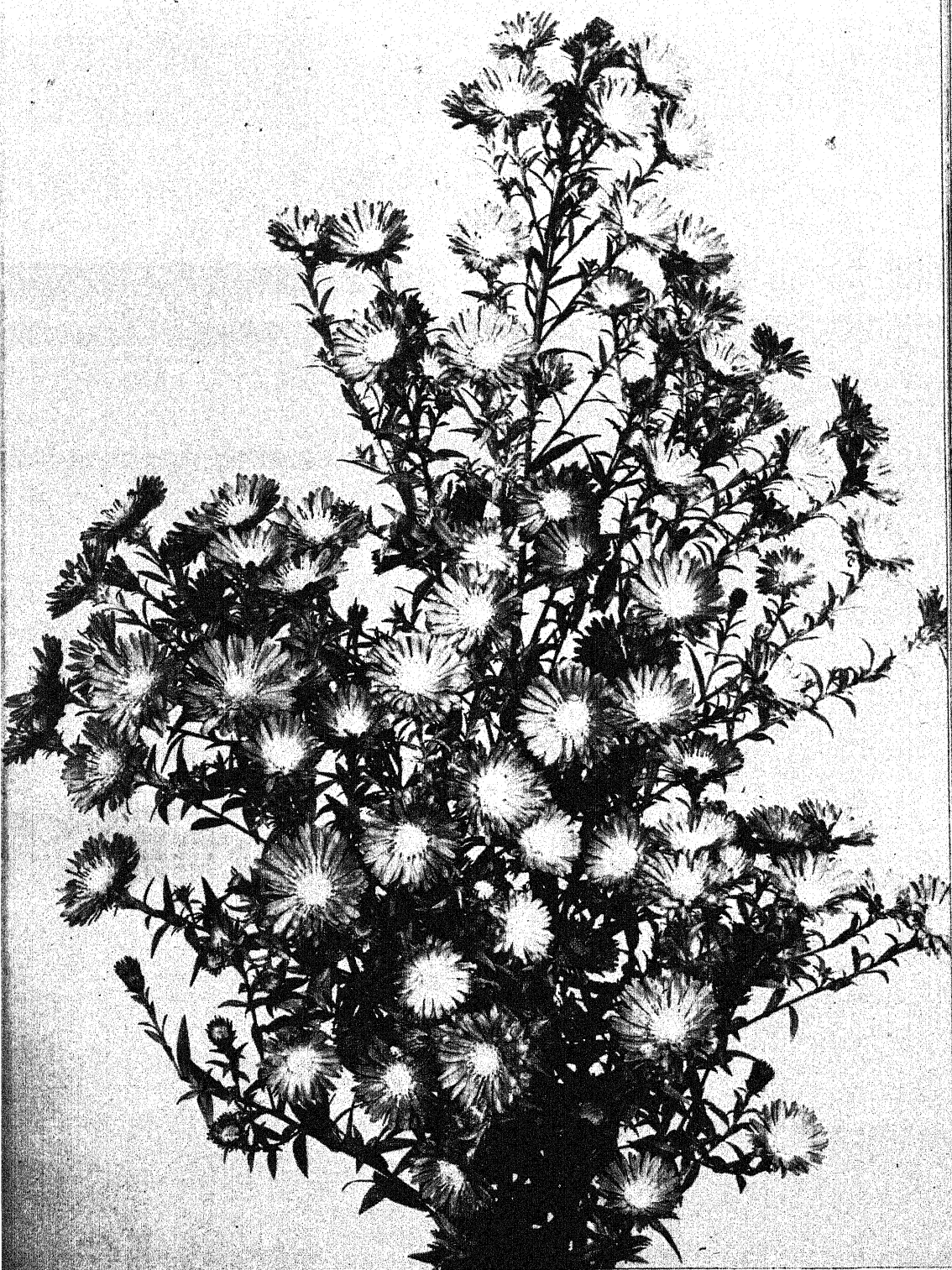
## MICHAELMAS DAISIES

| Species or Variety                | Average Height | Colour      | Season    | Remarks                |
|-----------------------------------|----------------|-------------|-----------|------------------------|
| <i>A. acris</i>                   | 3 ft.          | Deep lilac  | Aug.-Sep. | needs good support     |
| <i>A. AMELLUS</i> —Bessie Chapman | 2 ft.          | Blue        | Aug.-Oct. | best planted in spring |
| King George                       | 2 ft.          | Violet blue | Aug.-Oct. | "                      |
| Lady Hindlip                      | 2 ft.          | Rich pink   | Sep.-Oct. | "                      |
| Moerheim Gem                      | 2 ft.          | Violet      | Aug.-Sep. | "                      |
| Mrs. R. Woods                     | 2 ft.          | Rose        | Sep.-Oct. | "                      |
| Sonia                             | 2 ft.          | Rose pink   | Sep.-Oct. | "                      |
| <i>A. cordifolius</i> —Aldeboran  | 3½ ft.         | Blue        | Sep.-Oct. | enjoys shade           |
| Silver Spray                      | 4 ft.          | Pale lilac  | Sep.-Oct. | "                      |
| <i>A. ericoides</i> —Delight      | 2½ ft.         | White       | Sep.-Oct. | thrives in sun         |
| Golden Spray                      | 3 ft.          | Yellowish   | Sep.-Oct. | "                      |
| Hon. Vicary Gibbs                 | 3 ft.          | Lilac       | Sep.-Oct. | "                      |
| <i>A. Frikartii</i>               | 2½ ft.         | Sky blue    | Aug.-Sep. | "                      |

## GARDENS AND GARDENING

MICHAELMAS DAISIES—*continued*

| <i>Species or Variety</i>        | <i>Average Height</i> | <i>Colour</i>                      | <i>Season</i> | <i>Remarks</i>            |
|----------------------------------|-----------------------|------------------------------------|---------------|---------------------------|
| A. <i>Linosyris</i>              | 1½ ft.                | Yellow discs<br>no rays            | Aug.—Sep.     | needs lime                |
| A. <i>NOVÆ ANGLIÆ</i> wild form  | 4 ft.                 | Purple                             | Sep.—Oct.     |                           |
| Barr's Pink                      | 4 ft.                 | Pink                               | Sep.—Oct.     |                           |
| Crimson Beauty                   | 3 ft.                 | Crimson                            | Sep.—Oct.     |                           |
| Harrington's<br>Pink             | 3½ ft.                | Salmon pink                        | Sep.—Oct.     |                           |
| White form                       | 4 ft.                 | White                              | Sep.—Oct.     |                           |
| A. <i>NOVI BELGIÆ</i> —Beechwood | 3½ ft.                | Deep red                           | Sep.—Oct.     |                           |
| Challenger                       |                       |                                    |               |                           |
| Beechwood                        | 3½ ft.                | Cerise                             | Sep.—Oct.     |                           |
| Sunrise                          |                       |                                    |               | (one of latest to flower) |
| Blandie                          | 3½ ft.                | White                              | Sep.—Oct.     |                           |
| Blue Gown                        | 4½ ft.                | Blue                               | Oct.—Nov.     |                           |
| Carmen                           | 3 ft.                 | Rose pink                          | Sep.—Oct.     |                           |
| Col. Durham                      | 4 ft.                 | Mauve                              | Sep.—Oct.     |                           |
| Eventide                         | 3 ft.                 | Violet blue                        | Sep.—Oct.     |                           |
| Lassie                           | 3 ft.                 | Pale pink                          | Sep.—Oct.     |                           |
| Melbourne                        | 3½ ft.                | Soft blue                          | Sep.—Oct.     |                           |
| Magnet                           |                       |                                    |               |                           |
| Peace                            | 3 ft.                 | Lavender                           | Sep.—Oct.     |                           |
| Plenty                           | 4½ ft.                | Lavender blue                      | Sep.—Oct.     |                           |
| Princess Victoria                | 4 ft.                 | Purplish blue                      | Sep.—Oct.     |                           |
| Louise                           |                       |                                    |               |                           |
| Prosperity                       | 4 ft.                 | Pinkish crimson                    | Sep.—Oct.     |                           |
| Red Sunset                       | 3 ft.                 | Deep rose red                      | Sep.—Oct.     |                           |
| The Archbishop                   | 3 ft.                 | Purple blue                        | Sep.—Oct.     |                           |
| The Cardinal                     | 3½ ft.                | Deep rose red                      | Sep.—Oct.     |                           |
| The Dean                         | 3 ft.                 | Carminé pink                       | Sep.—Oct.     |                           |
| The Sexton                       | 3 ft.                 | Rich blue                          | Sep.          |                           |
| Winston                          | 2½ ft.                | Reddish purple                     | Sep.—Oct.     |                           |
| Churchill                        |                       |                                    |               |                           |
| A. N. B. dwarf hybrids—          |                       |                                    |               |                           |
| Audrey                           | 12 in.                | Lavender blue                      | Sep.—Oct.     |                           |
| Blue Bouquet                     | 15 in.                | Violet blue                        | Oct.          |                           |
| Margaret Rose                    | 9 in.                 | Rose pink                          | Oct.          |                           |
| Remembrance                      | 9 in.                 | Lilac                              | Oct.—Nov.     |                           |
| Snowsprite                       | 12 in.                | White                              | Sep.—Oct.     |                           |
| Victor                           | 6 in.                 | Lavender blue                      | Sep.—Oct.     |                           |
| A. <i>Thomsonii</i>              | 18 in.                | Pale blue                          | June—Oct.     |                           |
| A. <i>Tradescantii</i>           | 4 ft.                 | White, with<br>handsome<br>foliage | Oct.          |                           |



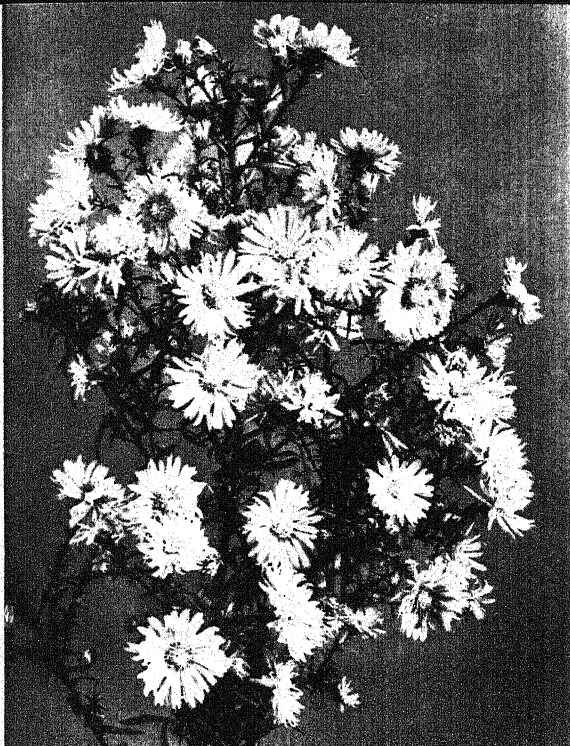
*Aster Beechwood Sunrise*  
*The yellow centre contrasts well with the bright cerise petals.*  
*A charming Aster, about 3½ ft. in height*



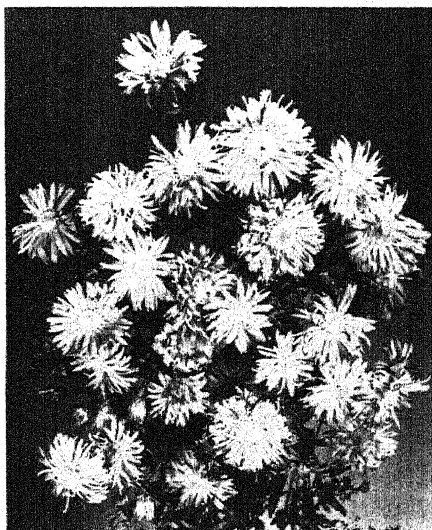


*Above: Aster Melbourne Magnet. A splendid hybrid  
with large, semi-double, soft blue flowers  
Below: Aster Eventide. One of the newer semi-doubles,  
violet-blue and exceptionally free flowering, of good sturdy habit*





*Aster The Dean. The rich carmine-pink display by this handsome Aster never fails to attract attention*



*Aster Plenty. Taller than most "Novi Belgii" varieties, bearing large lavender blooms*



*Aster Lassie. A large pure pink; one of the best pink Asters*





*Aster The Archbishop*  
Bears immense deep purplish-blue flowers with semi-double  
effect, like forms of *Callistephus*. Growth of medium height





*Aster Red Sunset*

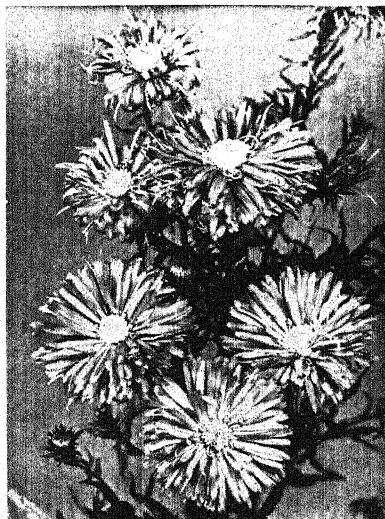
*Well named, because of the depth and richness of colour.  
The blooms are of pleasing texture and moderate size*



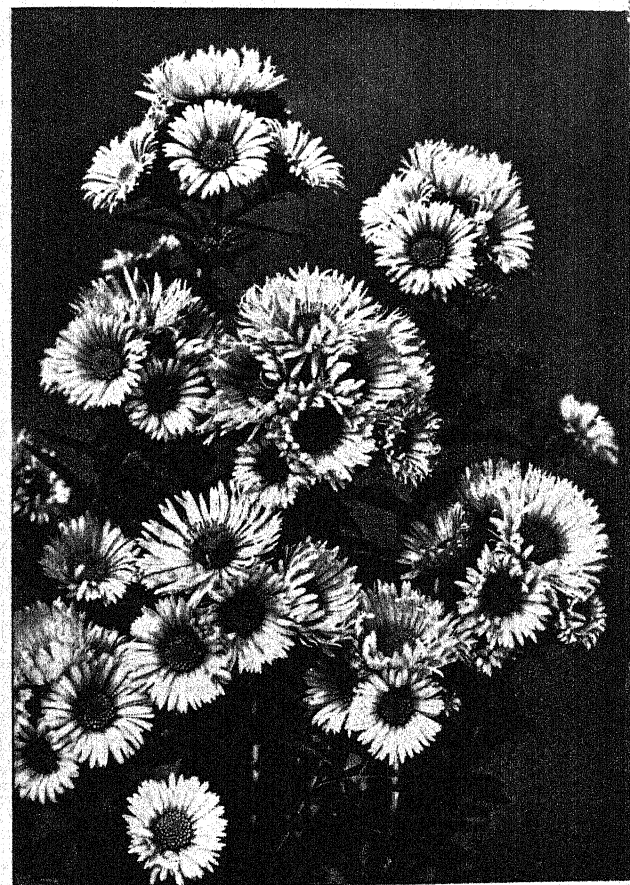




*Left: Aster Peace. This fine variety, with big lavender blooms, has done much to popularize present-day Asters*



*Above: Aster The Sexton. Its shapely blooms have the double merit of being a rich blue and appearing very early*



*Left: Aster Harrington's Pink. A lovely "Novae Angliae" Aster with a long lasting profusion of glowing salmon-pink blooms. About 4 ft. tall, it deserves a place in every herbaceous border*

*Opposite page: Aster Carmen  
A most attractive semi-double flower, rosy-pink in colour with a yellow eye. Of medium height and very free flowering*





*Aster The Cardinal*  
*The soft, deep, rose-red rays of this vigorous erect variety entitle it to a place in any Aster collection*

## *The Herbaceous Border*

By J. C. COUTTS, M.B.E., V.M.H.

IT HAS USUALLY BEEN CONSIDERED DIFFICULT WITH HERBACEOUS PLANTS ALONE to maintain a display in the border throughout the season, and therefore the so-called mixed border came into being. In this the herbaceous plants were supplemented with annuals, Dahlias and other tender plants. There were certain difficulties about this style of border, as the short-lived annuals had to be replaced with plants from the reserve garden, usually early flowering Chrysanthemums.

With the present-day shortage of labour, this style of gardening is impossible. In any case there is ample material to keep the border gay from the end of May until October, and it is merely a matter of choosing suitable plants and arranging them skilfully. It is true that the herbaceous border has long been popular and on the whole has suffered less from the prevailing fashion than most other styles of gardening. This is due no doubt to the fact that one can grow in quite a limited space a large number of beautiful and interesting plants.

Before deciding upon the choice of material and layout it is essential to consider the site and surroundings. An open position on well-drained soil is of first importance. A suitable background is almost essential. Yew hedges are very suitable, and good examples of these can be seen at the Royal Horticultural Society's Gardens at Wisley where there are large borders on the grand scale on either side of a broad grass path. I think the ideal background is a mellow old wall in brick or stone furnished with suitable climbers and wall shrubs, but I am afraid few can attain that ideal.

The width and length of the border will be more or less determined by the situation and space available. The minimum width of a small border should be not less than five or six feet, while the maximum may be ten to twelve feet. The larger border should always have a good working path at the back.

A word about the edges may not be amiss, for I have found that this is a matter that is too often neglected. The edge should always be supported with stone or some other suitable material, and furnished with appropriate plants which can be allowed to grow out in an informal manner, thus adding greatly to the general appearance of the border. This is easy if the border is alongside a gravel or paved path. If flanked by a lawn, there may be a paved path, or a foot of the lawn may be cut away and the space filled in with gravel. This allows the

edging plants to spray out, and most important, the mowing machine can be used without injury to the plants. There is a wide choice for this purpose, mostly of plants usually associated with the rock garden, which includes *Iberis*, *Arabis*, the many fine varieties of *Aubrietia*, and *Phlox subulata*, *Alyssum*, *Achilleas*, and many more.

Many of the herbaceous plants should not require to be replanted for three or four years, but there are exceptions such as *Paeonies*, the many fine varieties of *Anemone japonica*, which I suppose we must now learn to call *Anemone elegans*, *Dictamnus*, and *Veratrums*. These all resent frequent disturbance, and usually take two years to recover; on the other hand, some plants, such as the many fine varieties of Michaelmas Daisy, especially the *Novi Belgii* varieties may, with advantage, be replanted every year selecting strong shoots from the outside of the clump and planting them at least six inches apart.

For this reason it is important to prepare the border thoroughly, by deep digging, working in plenty of decayed farmyard manure, or material from the compost heap. Spent hops are valuable, especially on light soils, and so is bone meal which can be applied at any time to individual plants or groups.

As the border should reflect the owner's individual taste, one can only give a general idea of the layout and planting, but the beginner would be wise to prepare a planting plan. I must confess I have never made or used a plan, and I know that success depends on having an intimate knowledge of the available plants. Here let me say that I do not intend to give long lists of the many beautiful varieties of *Delphiniums*, herbaceous *Phloxes*, *Hemerocallis*, *Michaelmas Daisies* and so on, because many of them are soon superseded by supposed improved varieties. One can consult a good catalogue, or better still visit a good nursery at least twice during the season. Thus one has the advantage of seeing the habit and colour of the plant. It is hoped that the table on pp. 125-127, giving the height, time of flowering, and colour of a selection of herbaceous plants, will assist readers in their choice.

In the past, some gardeners have experimented with definite colour schemes, which have not always been successful; others have planted in special enclosures, blue, also white and yellow borders. When planning a border it is a great advantage if one has a keen natural sense of colour, and this I am afraid is by no means common. There are, however, certain natural colour sequences, a study of which should prove helpful. We can begin with blue, white, pink, and pale yellow which will lead up through deep yellow and orange to darker shades of red, crimson, and scarlet. The lack of hardy scarlet flowers is noticeable. I can think of only the old *Lychnis chalcidonica* and its double variety. *Potentilla* Gibson's Scarlet is also good, while *Monarda didyma* var. Cambridge Scarlet is more crimson than scarlet.



#### THE HERBACEOUS BORDER

With purple, mauve, and lilac shades one can use pink, pale yellow, and white; the last-named group is useful separating different blocks of colour, but must not be overdone as most of our white flowers are cold and the effect is inclined to be patchy. Warm creamy whites, as we have in *Spiraea Aruncus* and *Smilacina racemosa*, are valuable. On the whole, grey-foliaged plants are to be preferred and should be more generally used, as they blend with all colours and are particularly beautiful with blue, purple, and mauve shades. There are several species of *Artemisia* with fine, silvery foliage; perhaps the best is *A. Ludoviciana*, which attains a height of two and a half feet, but, if so desired can be kept cut down as a front line plant. It is surprising that the Globe Artichoke with its handsome foliage is not more generally used in large borders. Although really a shrub I have found the Cotton Lavender, *Santolina Chamaecyparissus* very effective. Cut back during March, it makes mounds of silver-grey foliage, while the variety *nana* is ideal for the front of the border.

When planning the border, do not arrange it in a regular slope from front to back; some of the taller plants should be brought into the middle, and in places those of medium height should come into the front. This completely alters and enhances the general contours of the border. Plants with a slender, spire-like habit are invaluable, as groups of them give an air and grace to the border. One might mention Delphiniums, *Verbascum vernale*, with slender spires four to five feet high and flowering from June to August; then there are many fine varieties of *Sidalcea* in various colours. Another beautiful plant for this purpose is *Malva Alcea* var. *fastigiata*, and there are several good subjects with this desirable habit. The fine varieties of *Iris sibirica* with their upright form of growth are ideal for this purpose; there is a mistaken idea that they must have a moist position by the water, but they are perfectly happy in any good garden soil. *Iris aurea*, and *I. ochroleuca*, which both attain a height of four to five feet, are excellent slender-growing species which may be interspersed with other plants.

The small border of five to six feet in width should present few difficulties, for instead of groups of several plants, one is more or less restricted to a single specimen of each plant. Thus it is simply a matter of selecting the required number and variety to cover the whole season, and arranging the early, mid-season, and late-flowering ones more or less alternately. Here, as in larger borders, the many fine varieties of *Phlox paniculata* in a good wide range of colours are invaluable. As far as possible, choose plants that do not require staking; there are three varieties of Michaelmas Daisy that are ideal for the small border—Little Boy Blue, Little Pink Lady, and Little Red Boy. Then the *Aster Amellus* varieties in blue and pink are invaluable; they are best moved during spring. The beautiful species, *A. Thomsonii* and its variety *nana* both flower all through the summer, and there is also the old species *A. acris* and its variety *nana*.

Here I would like to put in a plea for a more general use of our beautiful native *Malva moschata* and its variety *alba*. Another plant that is ideal for the small border is *Physostegia virginiana* var. *Vivid*, just over a foot in height, with rosy-crimson flowers which appear during the autumn. The *Physostegia* is known as the Obedient Plant, as the individual flowers can be pushed sideways and will remain where they are placed. I always tell the ladies that every woman should grow this plant; some "are not amused". Of course, all these plants are suitable for the large border, but I would like to recommend some of the new hybrid *Solidagos*, such as *Golden Elfe*, *Goldenmosa* with sprays of Mimosa-like flowers, *Lemore*, and *Leraft* all flowering throughout August and September. Other plants worthy of notice are *Salvia haematodes*, and *S. superba*, both of which flower from July to September. The blue *S. uliginosa* is valuable for late flowering, and *Clematis recta* and its double variety with white, sweet-scented flowers, are quite attractive scrambling over some rough branches, while *Clematis heracleaefolia* var. *Davidiana*, and the fine varieties *Campanile* and *Oiseau Bleu* with blue hyacinth-like flowers are valuable for late flowering.

In the past it was a common practice to cut down Lupins and Delphiniums, and thus secure a second display of flowers. Such a practice with present-day highly-bred Delphiniums would prove fatal, and it is better to plant alongside them good Michaelmas Daisies, of which there is now a wide choice in blue, pink, and white. They are ideal for succeeding early-flowering plants, and also serve to counter the tendency of the border to contain too much yellow during the autumn. Lupins do not seem to suffer to the same extent when cut down; this may be due to the fact that they have ample basal leaves.

With the large border, individual groups may consist of three, six, or even more plants. They should be arranged in narrow informal drifts merging into each other. If one or two individuals stray from the family group into the next one, so much the better. A continuous display can be maintained by inter-planting early and late-flowering varieties, or inter-grouping, so that the late-flowering plants will more or less take the place of the early ones. For example, *Anchusa italica* varieties could be inter-planted with *Artemisia lactiflora* or a suitable variety of Michaelmas Daisy may be used. *Lathyrus latifolius* and its beautiful white variety can be trained over a few rough branches to form an early flowering group, while in *Kniphofias* we have ample late material in the many fine hybrids of varying shades of scarlet, orange, and yellow, in heights from three to six feet. To replace early-flowering plants, a species of fairly recent introduction and now very popular is *K. Galpinii*, very graceful and free flowering, with saffron-yellow flowers; it is ideal for the small border, or the front of the large border, flowering from July to September. Then there is the old June flowering *K. corallina*, with brilliant orange-scarlet flowers.



*Left: Verbascum nigrum. Its slender spires of yellow flowers are produced over a long period. A useful species for relieving the flatness of a border*

*Below: Echinops Tournefortii (Globe Thistle). A rare species in cultivation. In general appearance it resembles the better known E. Ritro and E. sphaerocephalus*



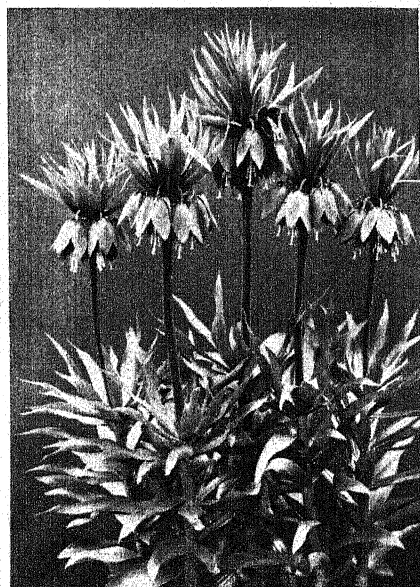
*Below: Astilbe Deutschland. A deep crimson, enjoying a moist, rich loam; valuable by the waterside*



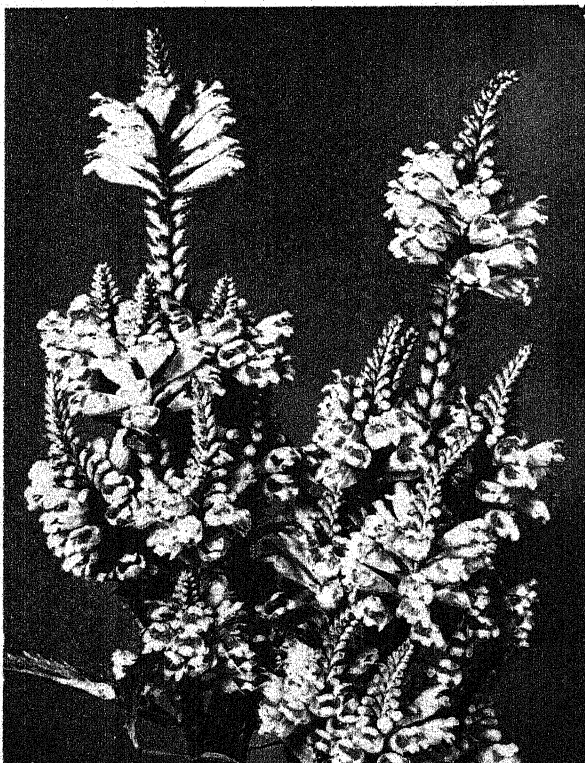




Left: *Kniphofia Orange Queen*.  
A useful late-flowering, orange-  
yellow Red Hot Poker. Very  
effective when grouped with *Yuccas*



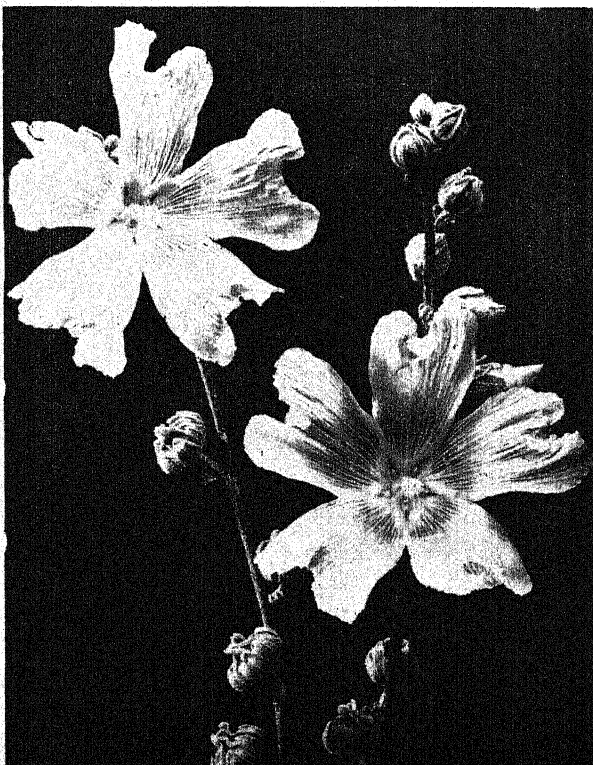
Left: *Physostegia virginiana* var.  
*Vivid*. A dwarf growing, autumn  
flowering plant, with rosy-crimson  
flowers





Above: *Anthemis Loddon*. A rich orange-yellow, about three feet in height, perhaps the best of them all

Left: *Fritillaria imperialis* (Crown Imperial). In varying shades of red, yellow, and orange. When established it should be left undisturbed



Below: *Gentiana asclepiadea* var. *alba*. The white flowered form of the Willow Gentian; for a moist, partially shaded spot



Left: *Malva setosa*. A beautiful rose coloured Malva, attaining a height of 6 feet; best treated as a biennial





*Monarda Croftway Pink.* Probably the best of the hybrids, bearing soft pink flowers over a long period



*Geranium grandiflorum.*  
Rich blue flowers, borne on erect 9-inch stems

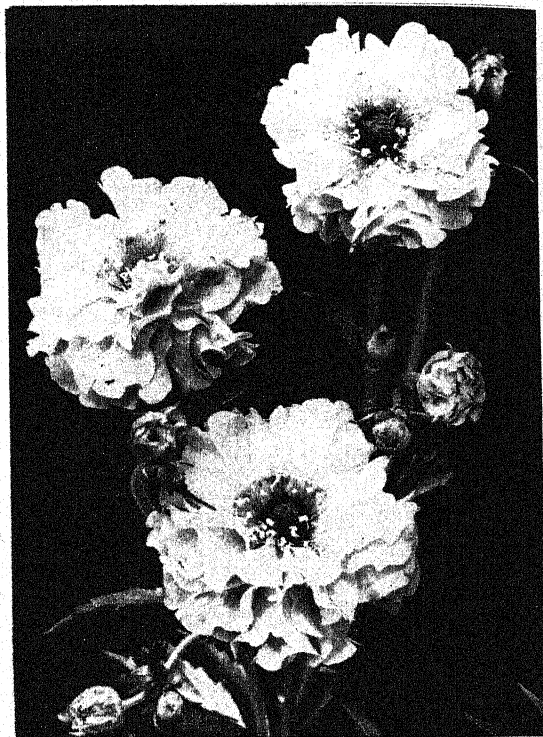




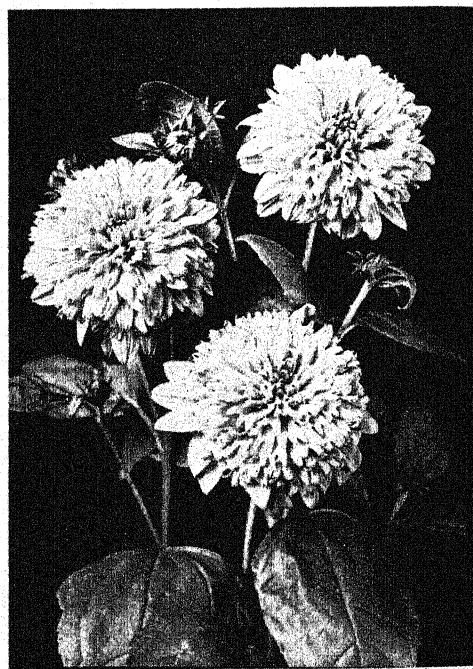
*Alstroemeria aurantiaca*. A valuable, free flowering plant for the sunny, well-drained border. Most useful as a cut flower

Right: *Geum Lady Stratheden*. A fine double, with pale golden-yellow flowers

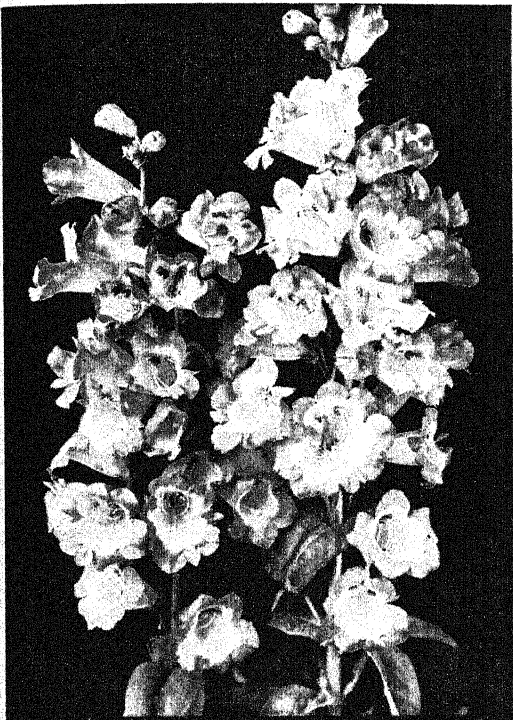
Below: *Veronica spicata* var. *alba*. An elegant plant for the front or middle of the border, together with the blue and pink varieties



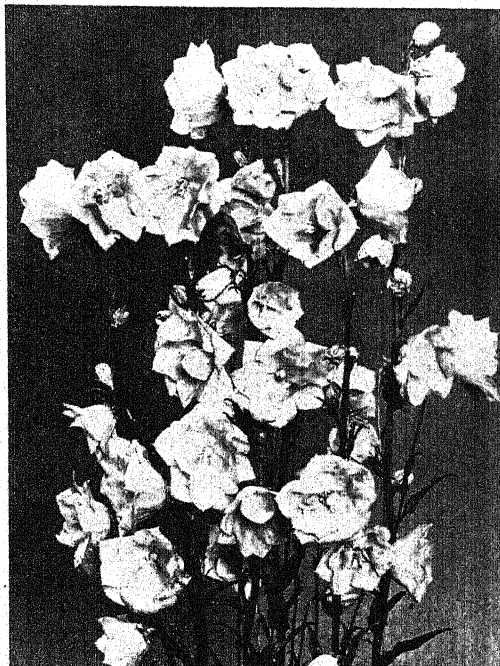
Below: *Helianthus Loddon Gold*. One of the best of the double-flowered sunflowers, bearing golden-yellow heads on erect 6-foot stems





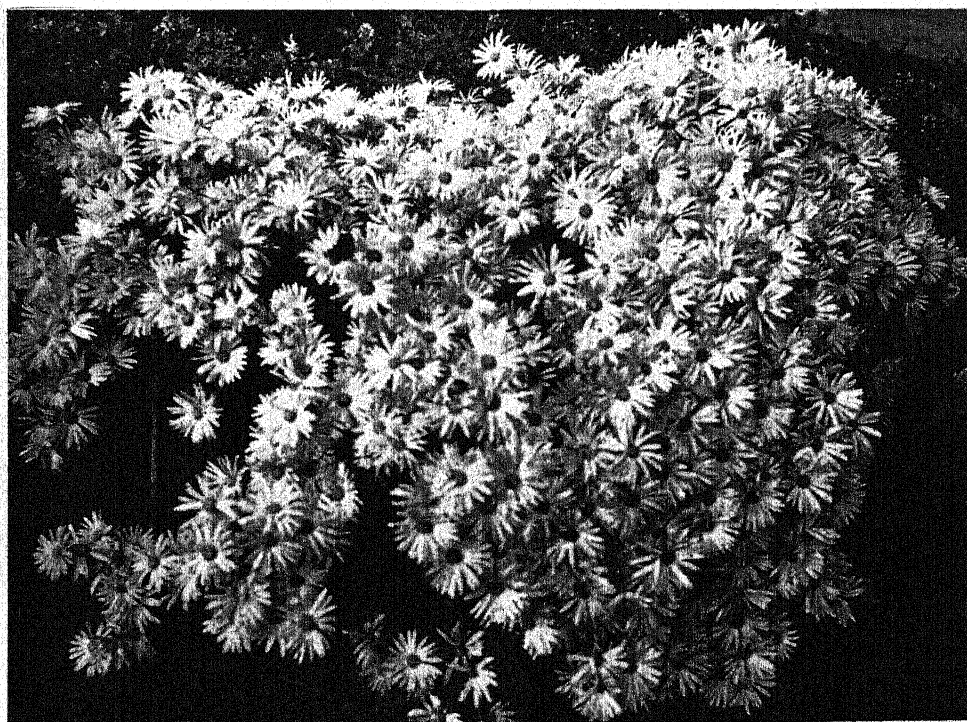


*Left: Modern Penstemons. It is a pity that these colourful hybrids are not more generally grown; they provide much colour in the autumn*

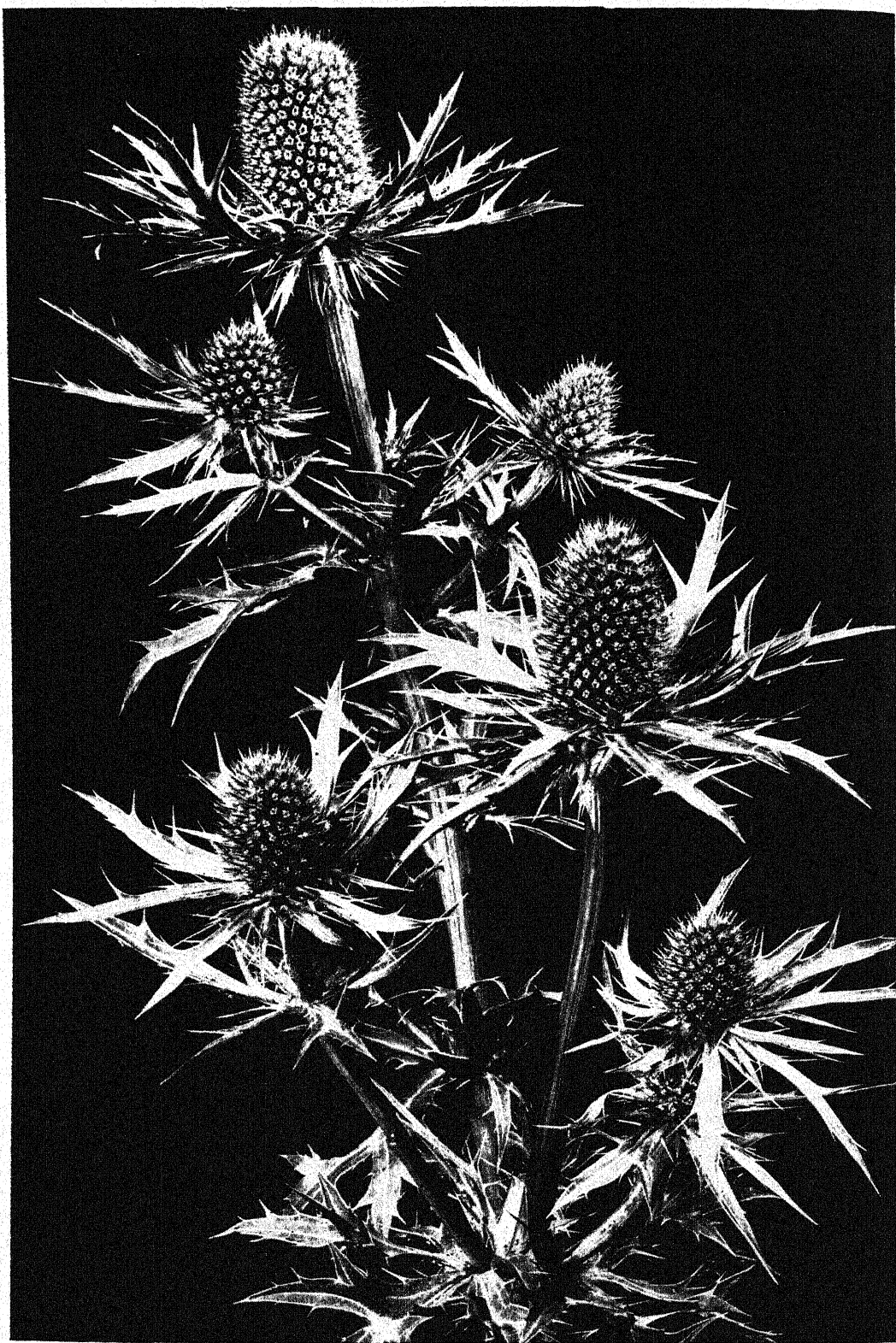


*Right: Campanula persicifolia var. Windsor Belle. A most decorative plant both for the border and as a cut flower*

*Below: Chrysanthemum rubellum var. Jervis Bay. A lovely shade of rich rose, very free flowering*







*Eryngium amethystinum*  
The striking metallic blue flowers and bracts of the Sea  
Hollies are most attractive in the border

# THE HERBACEOUS BORDER

Staking is so often badly done; as far as possible use pea sticks, put them in early and thus allow the plants to grow through them in a natural manner. Choice Delphiniums should be thinned out to five or six shoots, and each one staked separately with a stout cane. One word of warning; do not be disappointed if it takes two or even three years to attain the desired result.

From the following list it should be possible to select a range of plants that will give colour and interest over a long flowering period.

## HERBACEOUS BORDER PLANTS

| Name                                     | Height in feet | Time of Flowering | Colour                       |
|--|----------------|-------------------|------------------------------|
| <i>Acanthus mollis</i>                   | 3-4            | June-Aug.         | Reddish purple and white     |
| " <i>latifolius</i>                      | 3-4            | June-Aug.         | Purple, white                |
| <i>Achillea clypeolata</i>               | 1½             | June-July         | Canary-yellow                |
| " <i>filipendulina</i> (Eupatorium)      | 3-4            | July-Aug.         | Yellow                       |
| " <i>Millefolium</i> , Cerise Queen      | 2              | June-Aug.         | Cerise-crimson               |
| " <i>Ptarmica</i> , The Pearl            | 2½             | June-Sept.        | White                        |
| <i>Aconitum Napellus</i> vars.           | 3-4            | May-July          | Purple, blue, white, bicolor |
| " <i>Spark's Variety</i>                 | 5              | July-Aug.         | Indigo blue                  |
| " <i>Barker's</i> "                      | 6-7            | Sept.-Oct.        | Violet blue                  |
| <i>Alstroemeria aurantiaca</i>           | 3-4            | July              | Orange-scarlet               |
| <i>Anchusa italica</i> vars.             | 4-5            | May-June          | Various shades of blue       |
| Opal, Pride of Dover, etc.               |                |                   |                              |
| <i>Anemone japonica</i> in variety       | 3-3½           | Aug.-Sept.        | White, rose, pink            |
| <i>Anthemis cupaniana</i>                | 1              | June-Aug.         | White, silvery-grey foliage  |
| " <i>Sancta Johannis</i>                 | 2½             | June-Oct.         | Orange-yellow                |
| " <i>tinctoria</i> vars.                 | 2½             | June-Sept.        | White, yellow                |
| <i>Artemisia lactiflora</i>              | 5              | July-Sept.        | Creamy-white                 |
| " <i>Ludoviciana</i>                     | 2½             | All summer        | Silvery foliage              |
| <i>Asphodelus albus</i>                  | 3½             | April-May         | White                        |
| " <i>luteus</i>                          | 3              | June-July         | Yellow                       |
| " <i>ramosus</i>                         | 3              | June              | White                        |
| <i>Astilbes</i>                          | 2-3            | June-July         | Crimson, pink, white         |
| <i>Baptisia australis</i>                | 3              | May               | Blue                         |
| <i>Bocconia cordata</i>                  | 7-10           | June-July         | Sulphur-yellow, white        |
| " <i>microcarpa</i>                      | 7-10           | June-July         | Sulphur-yellow, white        |
| <i>Campanula lactiflora</i>              | 5-6            | June-Aug.         | Blue, white                  |
| " <i>la macrantha</i>                    | 4              | June-July         | Blue                         |
| " " var. <i>alba</i>                     | 4              | June-July         | Blue                         |
| " <i>persicifolia</i> in variety         | 3              | June-July         | Blue, white                  |
| <i>Catananche coerulea</i>               | 3              | July-Aug.         | Blue, white and bicolor      |
| <i>Centaurea dealbata</i>                | 2½             | June-July         | Rose                         |
| " <i>montana</i> vars.                   | 2              | May-Sept.         | Blue, white, rose            |
| <i>Cephalaria tatarica</i>               | 5-6            | July-Aug.         | Soft yellow                  |
| <i>Chrysanthemum maximum</i> vars.       | 2½-3           | June-Sept.        | White                        |
| <i>Cimicifuga japonica</i>               | 3-4            | Aug.-Sept.        | White                        |
| <i>C. racemosa</i> and <i>C. simplex</i> |                |                   |                              |
| <i>Coreopsis grandiflora</i> vars.       | 2-3            | All summer        | Yellow                       |
| " <i>verticillata</i>                    | 1½             | July-Aug.         | Yellow                       |
| <i>Dictamnus albus</i> vars.             | 2½             | June-July         | Rosy-purple                  |
| <i>Dicentra spectabilis</i>              | 2½             | May-June          | Rosy-red                     |

## GARDENS AND GARDENING

## HERBACEOUS BORDER PLANTS—continued

| Name                                       | Height in feet | Time of Flowering   | Colour                           |
|--|----------------|---------------------|----------------------------------|
| Echinops Ritro                             | 3-4            | July-Aug.           | Blue                             |
| Erigeron mesa-grande                       | 1½             | July-Aug.           | Blue                             |
| Erigeron Quakeress                         | 2              | June-Aug.           | Bluish-pink                      |
| „ philadelphicus                           | 1              | June                | Pink                             |
| Eryngium Oliverianum                       | 3              | July-Sept.          | Violet                           |
| „ planum                                   | 4              | July-Sept.          | Steel-blue                       |
| „ tripartitum                              | 2½             | June-Aug.           | Dark blue                        |
| Fritillaria imperialis                     | 4              | April               | Yellow, orange, red              |
| Gaillardias, several vars.                 | 1½-2           | All summer          | Yellow to crimson                |
| Galega Hartlandii                          | 3½             | All summer          | Lavender-blue                    |
| „ Niobe                                    | 3½             | All summer          | White                            |
| Gaura Lindheimeri                          | 2½             | All summer          | Rosy-white                       |
| Gentiana septemfida                        | 1½             | Aug.-Sept.          | Blue                             |
| Geranium armenum                           | 2              | May-Aug.            | Crimson                          |
| „ Endressi                                 | 1              | May-Sept.           | Rose-red                         |
| „ pratense                                 | 3              | June-Sept.          | Purple blue and white            |
| „ „ vars. album and plenum                 | 3              | June                | Purple-blue, white               |
| „ sanguineum                               | 1              | June-Sept.          | Crimson                          |
| Geum Borisii                               | 1½             | May-Oct.            | Scarlet                          |
| „ coccineum vars.                          |                |                     |                                  |
| „ Fire Opal                                | 2½             | All summer          | Scarlet, bronze                  |
| „ Lady Stratheden                          | 2              | All summer          | Golden-yellow                    |
| „ Mrs. Bradshaw                            | 2              | All summer          | Scarlet                          |
| Gillenia trifoliata                        | 2              | June                | White, rose                      |
| Gypsophila paniculata                      | 3              | June-Sept.          | White                            |
| „ „ var. Bristol Fairy                     | 3              | June-Sept.          | White                            |
| „ „ var. flore pleno                       | 3              | June-Sept.          | White                            |
| Helenium autumnale vars.                   | 2-4            | Late summer, autumn | Crimson-yellow, orange           |
| „ pumilum var. aurantiacum                 | 2½             | July-Aug.           | Orange, yellow                   |
| Helianthus decapetalus vars. (multiflorus) | 5              | Sept.-Oct.          | Yellow                           |
| Inula glandulosa                           | 2              | June-Aug.           | Orange-yellow                    |
| „ Royleana                                 | 2              | July-Sept.          | Orange-yellow                    |
| Iris aurea                                 | 4              | June-July           | Golden-yellow                    |
| „ ochroleuca                               | 4              | June-July           | White-yellow                     |
| „ sibirica                                 | 3-3½           | May-June            | Blue, white                      |
| Kniphofia, many vars.                      | 2-5            | July-Sept.          | Red, orange, yellow              |
| Lathyrus latifolius                        | 8              | July-Aug.           | Rose-crimson, white              |
| Lavatera Olbia                             | 6-8            | All summer          | Rose                             |
| Liatris callilepis                         | 2              | Aug.-Sept.          | Rosy-purple                      |
| „ pycnostachya                             | 3              | July-Sept.          | Crimson-purple                   |
| „ scariosa                                 | 2              | Aug.-Sept.          | Rosy-purple                      |
| Linaria dalmatica                          | 3-4            | June-Sept.          | Yellow, orange                   |
| Linum narbonense                           | 2              | July-Aug.           | Blue                             |
| Lychnis chalcidonica                       | 3              | July-Aug.           | Scarlet                          |
| „ coronaria vars.                          | 2-3            | June-Aug.           | Crimson-rose, white              |
| Lysimachia clethroides                     | 3              | July-Aug.           | White                            |
| Lythrum salicaria vars.                    | 3-4            | July-Sept.          | Crimson-purple, and rose-crimson |
| Malva moschata vars.                       | 2              | June-Sept.          | Pink, white                      |



# THE HERBACEOUS BORDER

## HERBACEOUS BORDER PLANTS—continued

| Name                                | Height in feet | Time of Flowering | Colour                         |
|-------------------------------------|----------------|-------------------|--------------------------------|
| Malva setosa                        | 1½-2           | July-Aug.         | Pale blue                      |
| Monarda didyma                      | 3-4            | July-Sept.        | Scarlet                        |
| Morina longifolia                   | 2              | July-Aug.         | White, crimson                 |
| Nepeta macrantha                    | 2½             | June-Sept.        | Lavender-blue                  |
| " Mussinii                          | 1½             | June-Sept.        | Lavender-blue                  |
| Oenothera fruticosa vars.           | 1              | June-Aug.         | Yellow                         |
| " speciosa                          | 2              | July-Sept.        | White, flushed-rose            |
| Penstemon barbatus                  | 2-3            | July-Sept.        | Scarlet                        |
| Physostegia virginiana              | 4              | July-Sept.        | Rosy-pink, white               |
| " var. Vivid                        | 1              | July-Sept.        | Rosy-crimson                   |
| Ceratostigma plumbaginoides         | 1              | Aug.-Oct.         | Blue                           |
| Polemonium coeruleum                | 2              | June-Aug.         | Soft blue                      |
| Potentilla argrophylla vars.        | 1½             | June-Aug.         | Yellow-orange, crimson         |
| " Gibson's Scarlet                  | 1              | June-Sept.        | Scarlet                        |
| Poterium canadense                  | 4-5            | Aug.-Sept.        | Creamy-white                   |
| Ranunculus aconitifolius var. plena | 2              | May-July          | White                          |
| Rudbeckia laciniata vars.           | 5-6            | July-Aug.         | Yellow                         |
| " speciosa                          | 2              | July-Aug.         | Old gold, black centre         |
| Salvia superba                      | 2-3            | July-Aug.         | Blue, purple bracts            |
| " uliginosa                         | 4-5            | Aug.-Sept.        | Azure-blue                     |
| Scabiosa caucasica vars.            | 2              | July-Oct.         | Blue, white                    |
| Sedum spectabile                    | 1½             | Aug.-Sept.        | Rose-pink                      |
| Sidalcea vars.                      | 2-4            | June-Sept.        | Pink, rose, red, crimson       |
| Smilacina racemosa                  | 2-3            | May-June          | Creamy-white                   |
| Spirea Aruncus                      | 5-6            | June-July         | Creamy-white                   |
| Statice latifolia                   | 1½-2           | August            | Lavender-blue                  |
| Thalictrum aquilegifolium           | 3              | June-July         | White, mauve, rosy-purple      |
| " dipterocarpum                     | 5-6            | July-Aug.         | Deep lavender, white           |
| " " var. album                      | 5-6            | July-Aug.         | Deep lavender, white           |
| " glaucum                           | 5              | June-July         | Yellow                         |
| Verbascum phoeniceum                | 2              | June-Aug.         | Various shades rose and purple |
| " vernale                           | 4-5            | June-Aug.         | Yellow                         |
| Veronica exaltata                   | 4              | Aug.-Sept.        | Pale blue                      |
| " incana                            | 1              | July-Aug.         | Blue                           |
| " longifolia var. subsessilis       | 1½             | Aug.-Sept.        | Purple-blue                    |
| " spicata                           | 1-2            | July-Aug.         | Blue, pink and white           |

## *Hardy Ferns*

By FRANCES PERRY

A HUNDRED YEARS AGO A GOOD COLLECTION OF FERNS WAS ADMIRER WITH A zest and ardour we would find difficult to comprehend to-day. Many, indeed, thought the graceful fronds and lacy foliage so beautiful and desirable, as to merit protection against every adverse force of Nature. Consequently it became fashionable to erect a grotto in a shaded conservatory nook, or to devote a house entirely to the "fernery".

Here, safe from lashing winds which can cut the fronds to pieces, or late frosts which scorch their tender greenness, the plants developed to a size and beauty hardly realized by the present generation. Even those of moderate means possessed Wardian cases—glass receptacles not unlike aquariums—in which the ferns were kept and grown. By keeping the case closed the grower maintained the moist, heavy atmosphere so beloved by these frequenters of the dappled shades. At this time Fern societies were in their heyday, with keen competition in the search for fresh forms, and a score of nurserymen found a useful living supplying their needs.

To-day the cult has passed. At the end of the century a new craze swept the gardening world, and Ferns could not hold their own against "Foliage Plants" and "Bedding Out" subjects. Every available piece of ground was given over to the new plants, and the Ferns were either scrapped or relegated to a place in the garden where nothing else would grow. I believe this to be the real reason for the decline in popularity of Ferns, and with fewer growers stocking them, the modern generation has little conception of what these old gardens were like.

The modern trend of horticulture seems to run towards size and colour; bigger and better blooms, and brighter and more vivid flower shades. It is perhaps a curious reflection on civilization that so many fail to find beauty apart from gaudy colouring; for there is a breath-taking delicacy in the seeming fragility of Fern foliage which makes for sheer delight. Then, too, their usefulness in the garden should commend them to every grower. Few plants ask less of us in the way of cultural consideration; in fact they may remain twenty years or more in the same position, without seeming detriment or undue attention. Specimen plants allowed to develop in this way can attain noble proportions and become extremely imposing.

However, a certain amount of care and consideration benefits all plants, and although Ferns are accommodating they should not be entirely ignored. The attentions they appreciate are an annual tidy-up and removal of old fronds, the suppression of weeds, a good watering in particularly dry seasons, and a mulch of rotted leaf-soil or peat in spring to feed and protect surface-running roots. One of their chief attributes is their ability to grow in shade, and they will flourish in most overshadowed spots provided moisture is available. Drought is the enemy and the chief cause of failure with Ferns, but much can be done to improve the light and hungry types of soil. The incorporation of rotted vegetable material such as compost, or leaves, peat, or spent hops, during the initial digging improves the physical condition of the land, and holds moisture and plant foods in solution for a considerable period. In later years top-dressing with similar material maintains an even moisture content and also nourishes the plants.

The use of animal manures, however, is not to be commended. It encourages soft growth and verdant luxuriance for a while, but ultimately affects the crowns which go brown and die off. I remember seeing a whole planting of Ferns fail because the ground on which they were planted had several years previously been used for a fowl run. An application of wood ashes now and again is beneficial, and an occasional dressing with old soot will improve the size and colour of the fronds.

There is little doubt that most gardens possess some spot which might with advantage be planted with Ferns, for, however well we plan, some borders must face north. By covering the ground with a mantle of Ferns, we mask its bareness as Nature intended and the few flowers which may be induced to grow in such uncongenial places—such as Bluebells and Foxgloves—will stand out like ruby or sapphire jewels against the kindly pall of shimmering green.

The transplanting of Ferns should be carried out during the dormant period, that is from September to March; the earlier the better so that the plants settle in with a minimum of growth disturbance. It is wise to avoid the real winter period with its dangers of frost, but otherwise keep within this period. Late spring planting presents difficulties, as it is almost impossible to avoid injuring any partially-developed fronds, and damage to these may arrest development and even adversely affect next season's growth. When dividing old plants avoid damaging the slender, wiry roots as much as possible, or recovery will be retarded until more are made. Plant firmly, but not tightly, for the Fern thrives best in a porous vegetable soil, like the spongy, leaf-soil carpet which covers the average woodland floor. Rhizomatous rootstocks should be set with the rhizomes as close as possible to the ultimate surface, and all other kinds up to, but not beyond the old planting mark.



Perhaps the most beautiful of all hardy Ferns is *Adiantum pedatum*, the American Maidenhair. Of compact habit, it likes a dappled light, as at the fringe of trees, and produces on purplish, polished stems of wiry texture, arching fans of delicate green, spore-edged leaflets. The normal growth height is twelve to eighteen inches, but this may vary under cultural conditions. A variety called Klondyke was collected by the late Lady de Bathe in the place of that name and is even more beautiful than the type. When established the plant grows about two and a half feet high, with umbrella-like fronds of delicate lacy texture, poised on slender ebony-black stems. Another form from Japan called *japonicum*, is distinguished by rosy fronds and stems in the spring of the year, a characteristic which gives it great charm.

*Phyllitis Scolopendrium* is the unwieldy name accorded the common Hart's Tongue, a strap leaved beauty with surfaces so glossy that the raindrops run from them like quicksilver. This is really a Fern for the waterside, for although tolerant of border existence, it is in the vicinity of water that it really comes into its own. Set in rock crevices or similar niches, beneath waterfalls, bridges or in well mouths it glistens with freshness, uncoiling the young fronds like the tongue of a butterfly until all traces of their scroll-like form are lost, save a little curl at the tip of the frond, which in a few days is levelled also. One of the most interesting features of the plant is its extreme propensity to variation; plants raised from spores show great diversity, particularly in the leaf margins. These may be frilled throughout their length (*crispum*), tessellated (*cristatum*), twisted like corkscrews, dwarfed or cock's combed. The interested grower would do well to see these plants in character before purchase, as the diversity of form is so great as to baffle description.

The beautiful Fern, *Athyrium Filix-femina*, whose graceful bearing and elegant outline has won for it the name of Lady Fern, is, indeed, the loveliest of all our larger natives. It grows freely when well established, the pale green fronds rising at times to three or four feet; each leaflet is divided into lacy segments of exquisite design. To be seen at its best it should be planted in colonies, and interspersed with Bluebells, Anemones and rosy Cranebills. At such times the westerling sun filtering through the trees, transforms the scene to a fairy glade; conjuring visions of sheer enchantment and simple contentment in a way whole acres of the brightest flowers could never evoke. The Lady Fern is most variable and a number of forms have been given varietal names. Many of these are even more beautiful than the type, with crested, twisted, finely cut hair-like segments, or congested and mossy fronds. Strangely distinct is the variety *Victoriae*, sometimes called the Queen of Lady Ferns, for the frond segments are crossed along the length of the mid-vein, like a row of little "x's" woven in lace. This interesting Fern was discovered about 1890 growing by the side of a main road in

Scotland. The clump was then some nine or ten years old, and it seems strange to think that it should have stayed so long in a public place without notice. From a utilitarian point of view, it is of interest to note that the Lady Fern was at one time used in Ireland, where it is common on all the bogs, for packing fruit and herrings.

The genus *Dryopteris* gives us many good ferns for the garden, such as the Oak Fern (*D. disjuncta*), a scrambling species growing six to nine inches high with triple fronds of intense bright green. This glory of colour is lost when the plant is exposed to too much light, so that a shaded nook suits it best. It spreads effectively by means of underground runners, which are black and wiry and creep to a considerable distance if permitted. *Dryopteris Goldiana* is useful in the bog garden as it appreciates plenty of moisture during the growing season. Its pale green fronds pass to golden yellow with age.

*D. hexagonoptera*, the Beech Fern, also likes to grow in damp spots, particularly near waterfalls, but will do well in the border if provided with plenty of leaf-soil. It is a rampagous species which makes a good carpenter and grows about six inches high. The Marsh Fern, *D. Thelypteris*, is another scrambler for moist shady spots, away from cutting winds.

The Sensitive Fern, *Onoclea sensibilis*, is a delightful North American plant with creeping rhizomes and two kinds of fronds. It can be grown successfully in a fairly dry shady spot, but for best results should be planted near the waterside in sun or shade. Here it runs in and out of the water with happy abandon and looks most impressive. It may be seen doing this very thing at the famous Myddleton House Gardens of Mr. A. E. Bowles and also in the late Lady Byng's lake at Thorpe-le-Soken. The sterile fronds are broadly cut into substantial segments, but the fertile ones stand one to two feet high, the segments being rolled up into bead-like bodies.

The Shuttlecock Fern, *Pteris Struthiopteris*, is a general favourite with those who know it, because of the extremely graceful manner in which the tall pale fronds grow round the crown. These lie in an arched circle reminiscent of a giant shuttlecock. It should be grown in partial or deep shade in rich vegetable soil.

Osmundas are the Royal Ferns, regal alike in majesty and tradition, for legend has it that a King called Osmund hid his wife and daughter from marauding Danes among the tall fronds of this magnificent plant, which more nearly resembles a tree fern than any of our native species. The commonest is *O. regalis*, which is undoubtedly the finest Fern for creating spectacular effect at the waterside. The sterile fronds normally grow four to five feet high, although specimens have been noted at ten feet and over; they are of a delicate pale green in spring. In autumn this hue changes to a warm fox-red, so that one hardly knows which is

the more beautiful—the fresh green coat of spring or the russet home-spun of autumn. The fertile fronds overtop the sterile ones and, indeed, most of the plants around them; they are massed along the top of the stem like sandy beads and resemble a Rheum inflorescence. Other species worthy of note are *O. cinnamomea* and *O. Claytoniana*.

The Bladder Fern, *Cryptopteris bulbifera*, is characterized by the bulb-like buds which appear on the undersides of the fronds. These are easily detached and make new plants. In *C. fragilis* the bulbils are absent. Both plants make attractive garden subjects and grow one to two feet tall.

The Common Prickly Fern, *Polystichum aculeatum*, is much loved in the shady garden because of its evergreen nature and the luxuriant green fronds which rise from a nest of rusty membranous scales. Neither summer's sun nor winter's cold seem to injure this dark green shading and the plants go on from year to year increasing in beauty. Many and varied are the forms of this elegant plant but all are good, if only to clothe the desolate slopes with a brave winter show. Even in high summer it is a relief to come across their quiet beauty and refreshing contrast after a pageant of bloom.

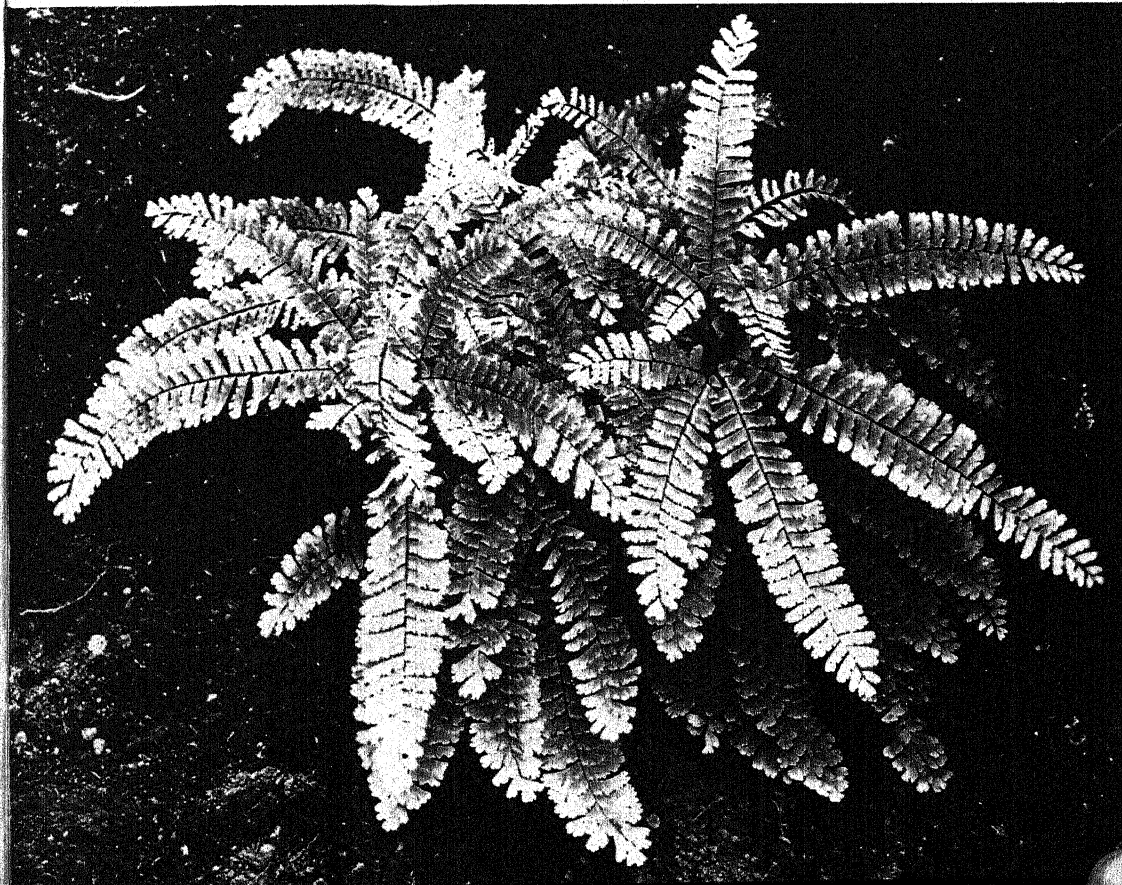
Present-day botanists have redistributed many erstwhile Polypodies into other genera, but one remains within the group which can find a place in every garden. This is the common Polypody, *Polypodium vulgare*, an adventurous sprite with a penchant for establishing itself in out of the way places. Sometimes we find it hanging from the gnarled branches or furred fork of a forest tree. At times its bright green fronds peep gaily from a stone wall crevice or rugged rock; or again, it may settle itself with sublime impudence in the straw thatch of a country cottage. But, this native beauty will also take kindly to domesticity and looks particularly well on a sloping bank or beneath a wall. In a sheltered spot it retains its verdure until a new crop of fronds springs from the rhizome the following spring. The fleshy tubers are about the size of a man's finger and creep about in all directions. The fronds may be 6 to 15 inches long, with oblong lobes cut almost to the midrib, and heavily studded on the reverse with orange clusters of spores. It may be of interest to herbalists to recall the reputed medicinal virtues of this Fern; for the mucilaginous liquid obtained from boiling its fronds with sugar was at one time esteemed as a remedy for coughs and colds. It apparently had to be gathered when full of the golden spores, in October and November, when it was known by the country name of Golden Locks. Several variations occur amongst cultivated varieties, chiefly in segmentation of the normally simple leaflets.

Let us then mantle our difficult spots in verdant greenness and rediscover in hardy Ferns the answer to many problems and a beauty which never palls.



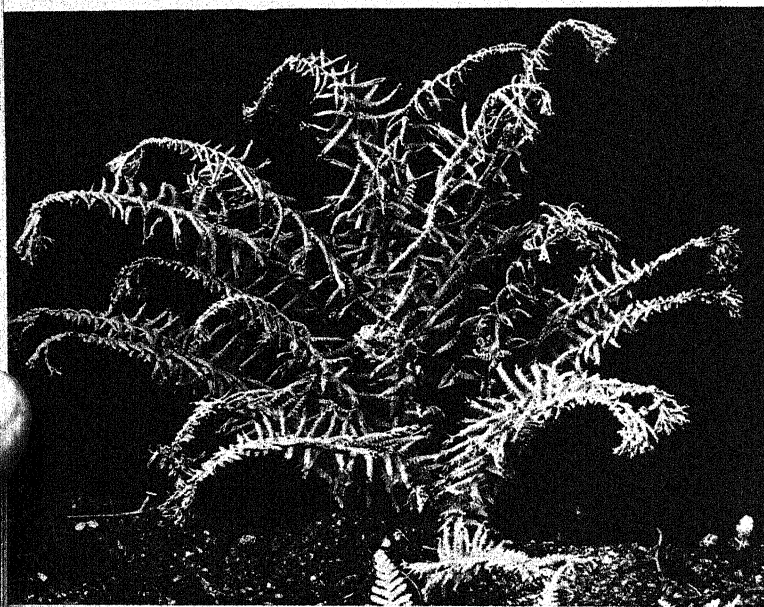


Above: *Athyrium Filix-femina*. The Lady Fern is a British species which shows considerable variation in the garden, growing larger in damp and shade than in more open places  
Below: *Adiantum pedatum*. Delicate light green fronds of the Hardy Maidenhair make a perfect foil for woodland plants





*A Polystichum aculeatum variety. A beautiful form of the Prickly Shield Fern which is almost evergreen, and particularly elegant when grown near rock*



*Athyrium Filix-femina var. Victoriae. An interesting variety of the Lady Fern, in which the frond segments are crossed and the ends tessellated in drooping bunches*



*Pteris Struthiopteris. The Ostrich Feather or Shuttlecock Fern is a plant for partial or deep shade. The fronds grow 3-4 feet tall*

*Opposite: Onoclea sensibilis. Sensitive Ferns luxuriating at the water's edge in Mr. E. A. Bowles' garden at Enfield, Middlesex*







Right: *Phyllitis Scolopendrium* var. *crispum*. Hart's Tongues are well known and have many uses. Their shining green fronds contrast beautifully with the lacy texture of other species



Above: *Osmunda regalis*. The Royal Fern is an ideal subject for the waterside, and characterized by two types of frond

Right: Soft Prickly Shield Fern. This graceful *Polystichum* is a most desirable garden plant and often attains considerable size. It favours a moist, somewhat shaded position



# INDEX

*Bold type indicates illustration reference*

- Acanthus, 45  
 — latifolius, 22, 125  
 — mollis, 48, 125  
 Acer griseum, 12  
 Achillea argentea, 82, 83  
 — clypeolata, 125  
 — filipendulina, 125  
 — Millefolium var. Cerise Queen, 125  
 — Ptarmica var. The Pearl, 125  
 Aconitum Barker's Variety, 125  
 — Napellus, 125  
 — Spark's Variety, 125  
 Adiantum japonicum, 130  
 — pedatum, 130, **133**  
 — var. Klondyke, 130  
 Aethionema warleyensis, 83  
 Alstroemeria aurantiaca, 47, **54**, **121**, 125  
 — Lightu, hybrids, 57  
 Anchusa caespitosa, 83  
 — italica, 116, 125  
 — var. Opal, 125  
 — — Pride of Dover, 125  
 Anemone appennina, 12, 81, 83  
 — blanda, 81, 83  
 — elegans, 45, 114, 125  
 — japonica, 45, 114, 125  
 — var. Margarete, **50**  
 — Woodland, 12  
 Anthemis cupaniana, 125  
 — Loddon, **119**  
 — nobilis, 47, 57  
 — Sancta Johannis, 125  
 — tinctoria, 125  
 Antholyza (s), 11  
 — ethiopica, 45  
 — paniculata, **13**  
 Aquilegia (s), 45, 48, **52**  
 Arabis, 81, 114  
 — albida var. plena, 83  
 Arbutus hybrida, 12  
 Armeria Bee's Ruby, 83  
 — maritima, 83  
 Artemisia arborea, 23  
 — canescens, **80**  
 — lactiflora, 47, 116, 125  
 — Ludoviciana, 23, 115, 125  
 Asphodelus albus, 125  
 — luteus, 125  
 — ramosus, 125  
 Aster(s), 44, 48, 57, 100, 114, 116  
 — acris, 103, 115  
 — var. nana, 115  
 Aster Amellus, 82, 83, 101, 102  
 — var. Bessie Chapman, 103  
 — — King George, 83, 102, 103  
 — — Lady Hindlip, 103  
 — — Moerheim Gem, 103  
 — — Mrs. R. Woods, 103  
 — — Sonia, 83, 102, 103  
 Aster cordifolius, 103  
 — var. Aldeboran, 103  
 — — Silver Spray, 103  
 — ericoides, 103  
 — var. Delight, 103  
 — — Golden Spray, 103  
 — — Hon. Vicary Gibbs, 103  
 — Frikartii, 102, 103  
 — Lynosyris, 103, 104  
 — Novae Angliae, 101, 104  
 — — Barr's Pink, 104  
 — — Crimson Beauty, 104  
 — — Harrington's Pink, 101, 104.  
**III**  
 — — White form, 104  
 — Novi Belgii, 104  
 — — Beechwood Challenger, 104  
 — — Beechwood Sunrise, 104, **105**  
 — — Blandie, 104  
 — — Blue Gown, 104  
 — — Carmen, 104, **110**  
 — — Col. Durham, 104  
 — — dwarf hybrids, 104  
 — — (dwarf hybrid) var. Audrey, 104  
 — — — Blue Bouquet, 104  
 — — — Margaret Rose, 104  
 — — — Remembrance, 104  
 — — — Snowsprite, 104  
 — — — Victor, 104  
 — — — Eventide, 104, **106**  
 — — — Lassie, 104, **107**  
 — — — Melbourne Magnet, 104, **106**  
 — — — Peace, 104, **111**  
 — — — Plenty, 104, **107**  
 — — — Princess Victoria Louise, 104  
 — — — Prosperity, 104  
 — — — Red Sunset, 104, **109**  
 — — — The Archbishop, 104, **108**  
 — — — The Cardinal, 104, **112**  
 — — — The Dean, 104, **107**  
 — — — The Sexton, 104, **111**  
 — — — Winston Churchill, 104  
 — Thomsonii, 45, 48, 102, 104, 115  
 — Tradescantii, 102, 104  
 Astilbe(s), 45, 125  
 — Deutschland, **117**  
 Athyrium Filix-femina, 130, **133**  
 — var. Victoriae, 130, **134**  
 Aubretia(s), 81, 83, 114  
 Balm of Gilead, 47  
 Baptisia australis, 125  
 Beech Fern, 131  
 Bladder Fern, 132  
 Bocconia cordata, **17**, 22, 125  
 — microcarpa, 125  
 Box hedge, 11, 12  
 Burning Bush, **55**





# INDEX

- Erica carnea*, 46, 57, 81  
 — *darleyensis*, 46, 57  
*Erigeron*(s), 44, 82  
 — *mesa-grande*, 48, 56, 82, 83, 125  
 — *philadelphicus*, 126  
 — *Quakeress*, 82, 83, 126  
*Eryngium*(s),  
 — *amethystinum*, 124  
 — *maritimum*, 82  
 — *Oliverianum*, 126  
 — *planum*, 126  
 — *tripartitum*, 126  
*Evening Primrose*, 80  
  
*Foam Flower*, 79  
*Foxglove*(s), 12, 21, 129  
*Fritillaria imperialis*, 118, 126  
*Funkia*(s), 45, 48, 82, 84  
*Funkia Sieboldii*, 76  
  
*Gaillardia*(s), 57, 82, 83, 125  
 — *Wirral Flame*, 50  
*Galega Hartlandii*, 126  
 — *Niobe*, 126  
*Garden design, examples of, in Britain*,  
 13, 14, 15, 16, 17, 18, 19, 73, 75, 76, 77  
 — — — in the United States of America,  
 20  
*Gentiana asclepiadea* var. *alba*, 119  
 — *septemfida*, 126  
*Geranium armenum*, 77, 126  
 — *Endressi*, 126  
 — *grandiflorum*, 48, 120  
 — *phaeum*, 21  
 — *pratense*, 12, 126  
 — — var. *album*, 126  
 — — *plenum*, 126  
 — *Renardii*, 74  
 — *sanguineum*, 126  
 — *sylvaticum*, 12  
*Geum*(s), 45, 48, 83  
 — *Borisi*, 126  
 — *coccineum*, 126  
 — *Fire Opal*, 126  
 — *Lady Stratheden*, 122, 126  
 — *Mrs. Bradshaw*, 126  
*Gillenia trifoliata*, 126  
*Globe Artichoke*, 115  
 — *flowers*, 56  
 — *Thistle*, 117  
*Golden Locks*, 132  
*Goldilocks*, 103, 104  
*Gypsophila paniculata*, 78, 83  
 — — var. *Bristol Fairy*, 57, 126  
 — — — *flore pleno*, 83, 126  
 — — — *Rosy Veil*, 83  
  
*Hart's Tongue*, 130, 136  
*Helenium*(s), 48, 57  
 — *autumnale*, 126  
 — *Crimson Beauty*, 83  
 — *pumilum*, 83  
 — — var. *aurantiacum*, 83, 126  
 — — — *magnificum*, 83  
  
*Helenium The Bishop*, 84  
 — *Wyndley*, 51  
*Helianthemum*(s), 82, 84  
*Helianthus*(es), 44, 47  
 — *decapetalus*, 126  
 — *Loddon Gold*, 122  
 — *Monarch*, 51  
*Hellebore*(s),  
*Helleborus foetidus*, 21  
*Hemerocallis*(es), 48  
 — *George Yeld*, 53  
*Hemlock, Giant*, 22  
*Heracleum giganteum*, 22  
*Hollyhock*(s), 53  
*Honesty*, 83  
*Hosta*(s), 45, 48, 82, 84  
 — *Fortunei* var. *robusta*, 84  
 — *glauca*, 76, 82, 84  
*Hypericum calycinum*, 46, 57  
  
*Iberis sempervirens*, 46, 57, 84  
 — *Little Gem*, 84  
*Inula glandulosa*, 126  
 — *Royleana*, 126  
*Iris*(es), 48  
 — *Aldura*, 28  
 — *Amandine*, 28  
 — *Amoena*, 27, 28  
 — *Arab Chief*, 28  
 — *Argus Pheasant*, 28  
 — *atrofusca*, 31  
 — *attica*, 32  
 — *aurea*, 115, 126  
 — *Banded Beauty*, 28  
 — *Benton Bluejohn*, 28, 31  
 — — *Coronet*, 28  
 — — *Daphne*, 28  
 — — *Pearl*, 28, 32  
 — *Black Banner*, 28  
 — *Black Forest*, 28  
 — *Blue Ensign*, 28  
 — — *Rhythm*, 28  
 — — *Shimmer*, 28, 30  
 — *Cahokia*, 28  
 — *Cherie*, 28  
 — *Chivalry*, 28  
 — *chrysographes*, 28  
 — *cristata*, 28  
 — *Cloth of Gold*, 28  
 — *Confetti*, 28  
 — *Cordovan*, 28  
 — *Desert Song*, 28  
 — *diseases*, 26  
 — *Dominion*, 26  
 — *Douglasiana*, 28  
 — *Elizabeth*, 28, 31  
 — *Elmohr*, 28  
 — *Fair Elaine*, 28  
 — *Fall Days*, 28  
 — *Firedance*, 28  
 — *Fort Ticonderoga*, 28  
 — *Garden Glory*, 28  
 — *Great Lakes*, 28  
 — *Helen Collingwood*, 28

# INDEX

- Iris Helen McGregor, 28  
 — histrioides, 28  
 — Hoogiana, 31  
 — innominata, 28  
 — Joan Lay, 28  
 — Lady Mohr, 28  
 — magnifica, 28  
 — Mary Geddes, 13  
 — Melodist, 28  
 — mesopotamica, 26  
 — Moonlight Madonna, 28  
 — Mrs. J. L. Gibson (Maisie Lowe), 28  
 — Mystic Melody, 28  
 — New Snow, 28, 31  
 — ochroleuca, 115, 126  
 — Ola Kala, 28  
 — pallida, 26  
 — Pierre Menard, 28  
 — Pink Cameo, 28  
 — Pink Formal, 28  
 — Pinnacle, 28  
 — Radiation, 28  
 — Ranger, 28  
 — Red Torch, 28  
 — Regelio-cyclus Teucros, 30  
 — Rocket, 28  
 — Royal Sovereign, 28  
 — sibirica, 11, 29, 47, 115, 126  
 — Starshine, 28  
 — Staten Island, 28, 31  
 — Strathmore, 28, 30  
 — stylosa, 28  
 — at Summerlea, Thames Ditton, Surrey, 30  
 — Summit, 28  
 — Sunset Blaze, 28  
 — Tea Rose, 28  
 — Three Oaks, 28  
 — trojana, 26  
 — unguicularis, 28  
 — Vanda, 28  
 — variegata, 26  
 — Vice Regal, 28  
 — Vigil, 28  
 — Wabash, 28  
 — White City, 28  
 — W. R. Dykes, 26  
  
 Kiringeshoma palmata, 45  
 Kniphofia(s), 45, 48, 116, 126  
 — corallina, 116  
 — Galpinii, 116  
 — Orange Queen, 118  
  
 Lady Fern, 130, 133, 134  
 Lamb's Ears, 17, 22, 72, 82  
 Lathyrus latifolius, 116, 126  
 Lavatera Olbia, 126  
 Liatris callilepis, 126  
 — pycnostachya, 48, 54, 126  
 — scariosa, 126  
 Liliun candidum,  
 Limonium (Statice) latifolia, 48, 57, 82,  
 84, 127  
  
 Linaria dalmatica, 126  
 Linum narbonense, 80, 84, 126  
 Lithospermum Grace Ward, 84  
 — Heavenly Blue, 84  
 — prostratum, 72, 81, 84  
 Lunaria biennis, 83  
 Lupin(s), 45, 48, 116  
 — Russell, 49  
 Lychnis chalcidonica, 45, 48, 114, 126  
 — coronaria, 126  
 Lysimachia clethroides, 126  
 — punctata, 48  
 Lythrum Rose Queen, 48  
 — salicaria, 126  
  
 Maidenhair, American, 130  
 — Hardy, 133  
 Malva Alcea, 45, 47, 48  
 — — var. fastigiata, 115  
 — moschata, 115, 127  
 — — var. alba, 115  
 — setosa, 119, 127  
 Marsh Fern, 131  
 Megasea(s), 72, 81  
 — cordifolia, 84  
 Melissa officinalis, 47  
 Michaelmas Daisy(ies), 44, 48, 57, 100,  
 114, 116  
 Monarda(s), 45, 47  
 — Croftway Pink, 120  
 — didyma, 127  
 — — var. Cambridge Scarlet, 48, 114  
 Montbretia(s), 57  
 Morina longifolia, 127  
 Mountain Ash, 12  
  
 Nepeta macrantha, 127  
 — Mussinii, 72, 84, 127  
  
 Oak Fern, 131  
 Obedient Plant, 115, 118  
 Oenothera(s), 45  
 — Fraseri, 80  
 — fruticosa, 127  
 — — var. major, 48  
 — missouriensis, 84  
 — speciosa, 127  
 Omphalodes cappadocica, 84  
 — verna, 84  
 Onoclea sensibilis, 131, 135  
 Osmunda cinnamomea, 132  
 — Claytoniana, 132  
 — regalis, 131, 136  
 Ostrich Feather Fern, 134  
 Othonopsis, 84  
  
 Paeonia anomala, 69  
 — arietina, 60  
 — Cambessedesii, 69  
 — Clusii, 67  
 — corallina, 69  
 — cretica, 60  
 — decora, 60  
 — Emodi, 68

# INDEX

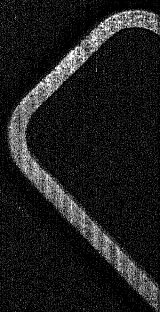
- Paeonia fragrans* var. *maxima plena*, 70  
 — *humilis*, 66  
 — *lactiflora*, 58  
 — *lutea*, 58  
 — Młokosiewicz, 60, 70  
 — Moutan, 58  
 — *officinalis* var. *alba plena*, 70  
 — — var. *mutabilis*, 70  
 — — — var. *roesa plena*, 70  
 — — — *rubra plena*, 60  
 — *paradoxa*, 60  
 — *peregrina*, 60, 70  
 — — var. *lobata*, 70  
 — *suffruticosa*, 58  
 — Veitchii, 60  
 — — var. *Woodwardii*, 60, 70  
 — Whitleyi, 63  
 — Wittmanniana, 60, 70  
*Paeony*(ies), 48, 57, 114  
 — Adolphe Rousseau, 69  
 — Alice Harding, 61  
 — Antwerpen, 66  
 — Baroness Schroeder, 61  
 — Beatrice Kelway, 64  
 — Belle of Somerset, 63  
 — Bijou de Chusan, 70  
 — Bridesmaid, 68  
 — Christine Kelway, 61  
 — Chromatella, 70  
 — Claire Dubois, 63  
 — Comtesse de Tuder, 70  
 — Duc de Wellington, 61  
 — Duchess of Sutherland, 61, 67  
 — Duchesse de Nemours, 62  
 — Elizabeth, 70  
 — English Elegance, 63  
 — E. St. Hill, 63  
 — Festiva Maxima, 62  
 — Germaine Bigot, 63  
 — Globe of Light, 64  
 — Hyperion, 69  
 — James Kelway, 62  
 — Kelway's Brilliant, 64  
 — — Glorious, 62  
 — — Lovely, 64  
 — — Queen, 63, 66  
 — — Unique, 64  
 — Lady Alexandra Duff, 63  
 — Laura Dessert, 62  
 — L'Esperance, 70  
 — Lord Kitchener, 68, 69  
 — Louise Mouchelet, 70  
 — Madame Emile Debatene, 64  
 — Madame Louis Henry, 71  
 — Madame Stuart Low, 70  
 — Marie Crousse, 63  
 — Miss Salway, 62  
 — Mons. Martin Cahuzac, 69  
 — — Jules Elie, 63  
 — Nellie, 64  
 — Philippe Rivoire, 69  
 — Phyllis Kelway, 63  
 — Pink Delight, 64  
 — Pink Pearl, 64  
*Paeony* Pride of Langport, 69  
 — Primevere, 62  
 — Queen Alexandra, 62  
 — Queen Victoria, 67  
 — Regina Belgica, 70  
 — Reine du Portugal, 70  
 — Sarah Bernhard, 64  
 — Sir Galahad, 62  
 — Solange, 62  
 — Souvenir de Louis Bigot, 69  
 — Souvenir de Maxime Cornu, 71  
 — Therese, 64  
 — White Rose of Sharon, 65  
 — Wilbur Wright, 69  
 — Wild Rose, 64  
*Penstemon*(s), 45, 123  
 — *barbatus*, 127  
*Phlomis*(es), 57  
*Phlox* Beauty of Ronsdorf, 84  
 — *decussata*, 57  
 — Douglasii, 84  
 — May Snow, 84  
 — *paniculata*, 115  
 — *subulata*, 74, 81, 114  
 — — var. *atropurpurea*, 84  
 — — — Brightness, 84  
 — — — *camlaensis*, 84  
 — — — G. F. Wilson, 84  
 — — — Lilac Queen, 84  
 — — — Vivid, 84  
*Phyllitis Scolopendrium*, 130  
 — — var. *crispum*, 136  
 — — — *cristatum*, 130  
*Physalis Alkekengi*, 53  
*Physostegia virginiana*, 127  
 — — var. *Vivid*, 115, 118, 127  
*Pink*(s), 84, 85, 99  
 — Alpine, 99  
 — Perpetual, 99  
 — Show, 85, 94, 99  
*Platycodon grandiflorum*, 55, 57  
*Polemonium coeruleum*, 127  
*Polygonum affine*, 74  
 — *cuspidatum*, 22  
 — *lichiangense*, 54  
 — *vacciniifolium*, 57  
*Polypodium vulgare*, 132  
*Polypody*(ies), 132  
*Polystichum*(s), 136  
 — *aculeatum*, 132, 134  
*Potentilla argyrophylla*, 127  
 — Gibson's Scarlet, 114, 127  
*Poterium canadense*, 127  
*Prickly Fern*, 132, 134, 136  
*Prunella Loveliness*, 84  
*Prunus Serrula*, 12  
*Pteritis Struthiopteris*, 131, 134  
*Pyrethrum*(s), 44, 47, 57  
*Ranunculus aconitifolius* var. *plena*, 127  
 Red Hot Poker(s), 45, 48, 116, 118, 126  
*Romneya Coulteri*, 55  
 Royal Botanic Gardens, Kew, 79  
 Royal Fern, 131, 136



# INDEX

- Rudbeckia(s), 44
  - californica, 57
  - laciniata, 127
  - Newmanii, 84
  - speciosa, 127
- Salix vitellina, 22
  - — var. britzensis, 22
- Salvia haematodes, 116
  - superba, 116, 127
  - uliginosa, 116, 127
- Santolina(s), 81
  - Chamaecyparissus, 115
  - incana, 84
  - — var. nana, 84
- Saponaria(s), 74
- Saxifraga umbrosa, 81, 84
- Scabiosa caucasica, 45, 47, 57, 84, 127
  - — var. Clive Greaves, 50
- Sea Holly(ies), 134
- Sea Lavender, 48, 57, 82, 84
- Sedum spectabile, 45, 57, 84, 127
- Senecio clivorum, 11, 13
  - Greyii, 11, 13
- Sensitive Fern, 131, 135
- Shuttlecock Fern, 131, 134
- Sidalcea(s), 57, 115, 127
- Silver Birch, 12
- Smilacina racemosa, 115, 127
- Snowdrop(s), 12
- Solidago Golden Elfe, 116
  - Goldenmosa, 116
  - Lemoire, 116
  - Leraft, 116
- Spiraea Aruncus, 115, 127
- Stachys grandiflora, 78
  - lanata, 17, 22, 72, 82, 84
- Stagshorn Sumach, 22
- Statice latifolia, 48, 57, 82, 84, 127
- Sweet Chestnut, 12
- Sweet Rocket, 21
- Thalictrum aquilegifolium, 127
  - dipterocarpum, 127
  - — var. album, 127
  - glaucum, 127
- Thymes, 74
- Tiarella cordifolia, 72, 81, 84
  - Wherryi, 79, 84
- Trillium grandiflorum, 75
- Tritonia(s), 57
- Trollius(es), 45, 56
  - europaeus,
- Verbascum nigrum, 117
  - phoeniceum, 127
  - vernale, 115, 127
- Veronica(s), 45
  - exaltata, 127
  - incana, 127
  - Loddon Blue, 84
  - longifolia var. subsessilis, 127
  - Royal Blue, 84
  - Shirley Blue, 84
  - spicata, 57, 127
  - — var. alba, 122
  - virginica, 57
- Viburnum Burkwoodii, 21
  - rhytidophyllum, 11, 21
- Willow, the Golden, 22
  - Weeping, 22
- Winter Aconites, 12
- Yew hedges, 113

GARDENING NOTES

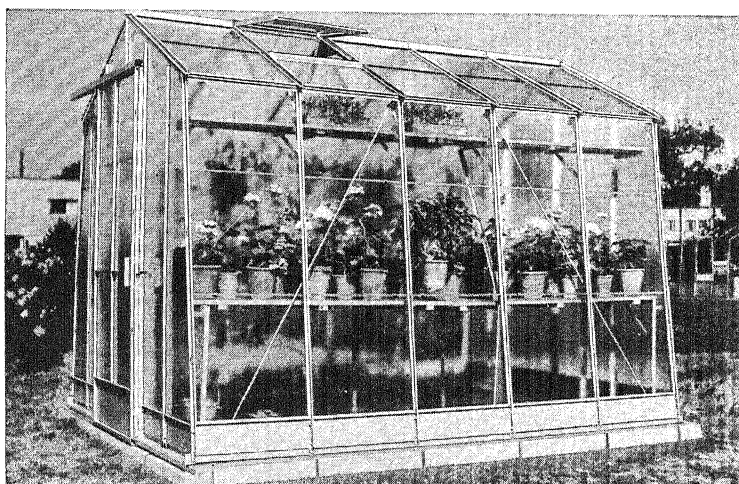


GARDENING NOTES



# CRITTALL

## RUSTLESS GREENHOUSES & GARDEN FRAMES



● Height: Ridge 7 ft. 7 ins.; Eaves 6 ft. 0 ins. Width: 7 ft. 10 ins. Length from 6 ft. 1 in. Can be extended to any length in multiples of 2 ft. wide glass.

● Supplied with sliding door, roof ventilators, glass, putty and erection booklet.

● To prevent damage to glass, metal panels are fitted at ground level all round.

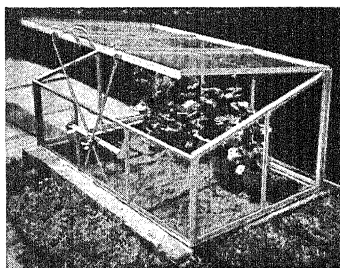
*Also available:* Side ventilators, staging supports, shelf brackets, dividing partitions, training wire clips.

● Garden Frames of cast aluminium to form sectional units. Height: 1 ft. 2 ins. front and 1 ft. 10 ins. back; Width: 2 ft. 6 ins.; Length: 4 ft. 0 ins.

● Clear horticultural glass secured by putty and clips.

● Top held open in any position by aluminium tubular stays.

*Full particulars will be sent on application.*

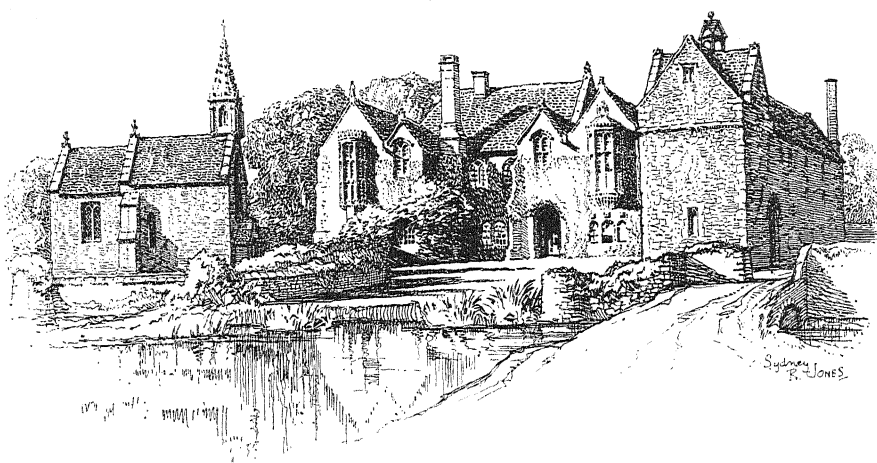


Made by THE CRITTALL MANUFACTURING CO. LTD., BRAINTREE, ESSEX

Enquiries to: THE CRITTALL MANUFACTURING CO. LTD.

EVINGTON VALLEY ROAD, LEICESTER

# *The English Scene*



*Great Chalfield Manor-house*

**T**he spirit of England and the character of her people are indelibly written on the face of the countryside, in town, village, and rural scene.

With these qualities in mind, Sydney R. Jones has written for *The Studio* a number of books in which he brilliantly captures, in text and illustration, the spirit of England. Those who regret the passing of old ways—the England of country lanes and villages, of stately homes, of the squire and craftsman—will find in these books the lover's enthusiasm and appreciation for old England and her charm.

Those titles which are immediately available are:—

ENGLAND SOUTH (18s.)

ENGLAND WEST (18s.)

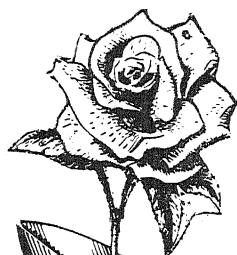
LONDON TRIUMPHANT (15s.)

THAMES TRIUMPHANT (15s.)

Each book is profusely illustrated by the author's own sketches reproduced by letterpress and lithography. Uniform size  $9\frac{3}{4} \times 6\frac{1}{4}$ .

THE STUDIO LIMITED 66 CHANDOS PLACE  
LONDON WC2

## Born of the Sword

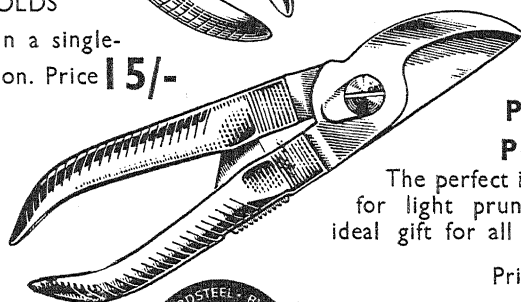


**W.448  
FLOWER  
GATHERER**

CUTS and HOLDS  
flower stems in a single-  
handed operation. Price **15/-**

Wilkinson Sword Garden Tools are made from finely tempered swordsteel by craftsmen whose tradition of skill goes back to 1772, when the firm of Wilkinson first started making swords for Royalty and famous generals. That is why you can always rely on Wilkinson Sword Garden Shears and Pruners.

With RUST-RESISTING blades they represent the very best in quality and design. Ask to see them at your nearest stockist.



**W.42  
POCKET  
PRUNER**

The perfect instrument for light pruning. An ideal gift for all gardeners.

Price **12/6**



**WILKINSON  
SWORD  
GARDEN TOOLS**

THE WILKINSON SWORD CO. LTD., ACTON, LONDON, W.4.  
Makers of the famous Wilkinson Razor

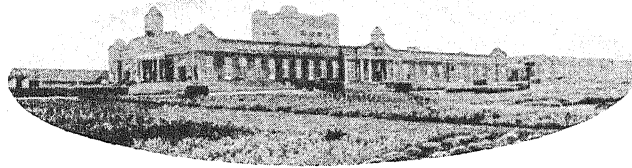


By Appointment Seedsmen



To H.M. The King

*Carters Tested Seeds Ltd.*



*Carters Head Offices, Warehouses and Trial Grounds at Raynes Park*

**Carters**  
TESTED SEEDS

**FOR ALL YOUR  
GARDEN NEEDS**

FLOWER, VEGETABLE AND GRASS SEEDS, BULBS,  
FRUIT AND ROSE TREES, FERTILISERS, ETC.

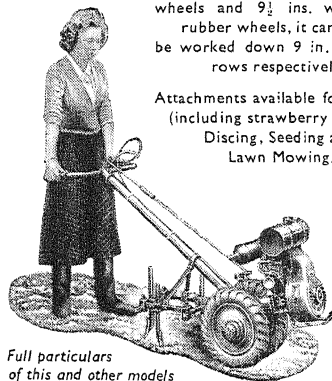
CATALOGUES ON REQUEST

*(Please enclose postage)*

**CARTERS TESTED SEEDS LTD., RAYNES PARK, LONDON, S.W.20**

**THE  
AUTO CULTO  
"MIDGET"**

This powerful, well balanced and easily handled machine is ideal for nurseries, market gardens, estates, etc. Being only 7½ ins. wide over iron wheels and 9½ ins. wide over rubber wheels, it can easily be worked down 9 in. or 11 in. rows respectively.



Attachments available for Hoeing  
(including strawberry hoeing),  
Discing, Seeding and  
Lawn Mowing.

Full particulars  
of this and other models  
on request.

**ALLEN & SIMMONDS (AUTO CULTO) LTD**  
READING. Tel. 4471

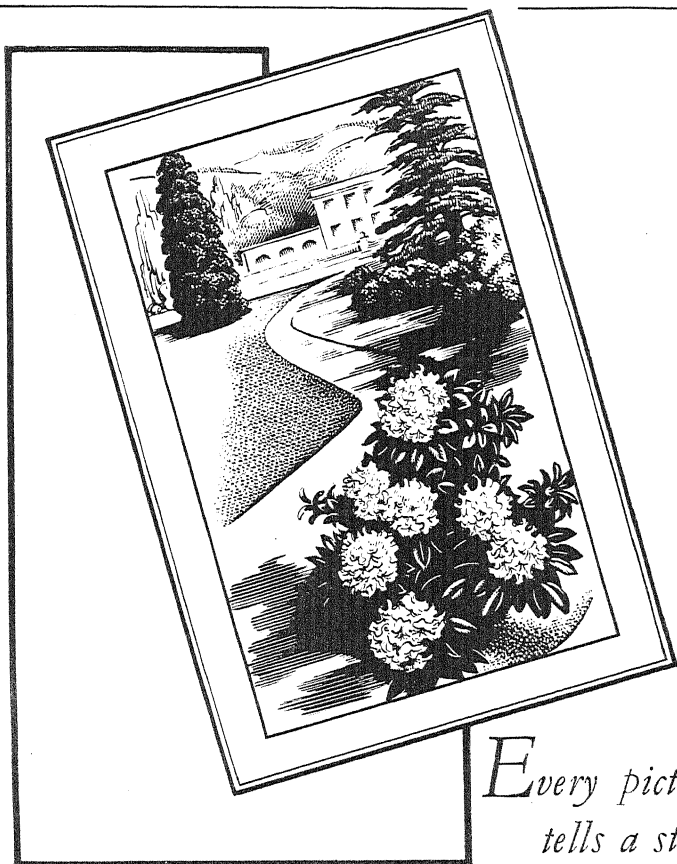
**PERRY'S  
of ENFIELD**

*Growing since 1890*

●  
**RARE BULBS  
HERBACEOUS PLANTS  
ALPINES, WATER LILIES  
AQUATIC PLANTS  
and FISH**

●  
*Catalogues on application to*

**PERRY'S  
HARDY PLANT FARM  
ENFIELD**



*Every picture  
tells a story*

**A**ND every week, for over 110 years, **The Gardeners' Chronicle** has been earning its unique reputation by reflecting every side of the practice and science of horticulture.

Regular weekly features give instruction in every branch of gardening. New plants, pests and diseases are described and illustrated; the latest knowledge of soils, manures and fertilizers and advances in scientific horticulture are discussed. **The Gardeners' Chronicle** is the only gardening paper that provides weekly cultural instructions for Orchid growers. Through its columns, gardeners keep in touch with the activities of their friends and colleagues. New books are reviewed, horticultural machinery and garden sundries are described, the important exhibitions accurately reported, and forthcoming horticultural events announced.

These features in themselves, as well as the classified and display advertisement columns, make **The Gardeners' Chronicle** indispensable for all gardeners, both amateur and professional.

Sixpence, every Friday, ✱ from all newsagents

*Subscription*

Post incl. : 30s. a year. 15s. six months. 7s. 6d. three months.

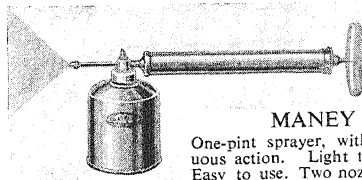
*from*

**THE GARDENERS' CHRONICLE, LTD.**

33 JOHN STREET, THEOBALDS ROAD, LONDON, W.C.1

Telegrams : "Gardchron, Holb, London."

Phone : Holborn 1191



#### MANEY

One-pint sprayer, with continuous action. Light to handle. Easy to use. Two nozzles. For spraying glasshouse plants also roses. Skilfully made, in brass and copper.

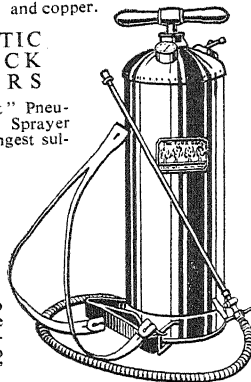
#### PNEUMATIC KNAPSACK SPRAYERS

Four Oaks "Kent" Pneumatic Knapsack Sprayer (for spraying strongest sulphur washes).

Three sizes—  
1½, 2½ and  
4 gallon.

*Carriage Paid.  
Please write us.*

"Thank you for so promptly sending me such a splendid spraying machine, at so reasonable a price."



The FOUR OAKS Spraying Machine Co. Ltd.  
Four Oaks Works, Sutton Coldfield, near  
Birmingham.

Manufacturers and Exporters of Spraying Machines  
since 1895.

*Regular Exhibitors at the Chelsea Flower Show.*

## HERBACEOUS PLANTS

—the finest quality obtainable

We offer the following collections of hardy plants for delivery at correct planting time.

#### TALL BEARDED IRISES

The AMBERLEY Collection of New "Cedric Morris" varieties, 6 strong plants including one pink variety ... £5 15s. 0d.

The CHICHESTER Collection of up-to-date favourites, 12 fine plants in 12 varieties ... 45s. 0d.

The ARUNDEL Collection for every garden, 12 plants in 12 varieties ... 12s. 6d.

**THE GOODWOOD COLLECTION OF MICHAEL-  
MAS DAISIES**  
6 strong plants in 6 new varieties ... 18s. 0d.

#### BORDER PHLOX

The Bignor Collection, 12 plants in 4 best named varieties ... 25s. 0d.

**THE CROFTWAY GENERAL COLLECTION OF  
HERBACEOUS PLANTS**  
25 grand plants ... 30s. 0d.



*Packing and carriage free*

1952 Illustrated Catalogues sent free on request

We specialise in BORDER PLANNING

**F. TOYNBEE Ltd.**

Croftway Nurseries, Barnham

Nr. Bognor Regis, Sussex

#### BIRD PORTRAITURE



## Country books

by C. F. Tunnicliffe

Every country lover will be stirred by the works of C. F. Tunnicliffe; in them one can see the true countryman's loving reverence for the natural beauty of form, colour and line.

The depth of his affection, keenness of vision and craftsmanship can be seen in *My Country Book* (10s. 6d.) and *Bird Portraiture* (10s. 6d.), whilst for those who would care to emulate the author there is *How to Draw Farm Animals* (3s. 6d.), in the *How to Draw Series*.

From all good booksellers or the Publishers.

THE STUDIO LIMITED 66 CHANDOS PLACE LONDON WC2



# THE ROYAL HORTICULTURAL SOCIETY'S DICTIONARY OF GARDENING

Edited by FRED J. CHITTENDEN, O.B.E., F.L.S., V.M.H.

assisted by Specialists in several Departments

Foreword by LORD ABERCONWAY, C.B.E., V.M.H.

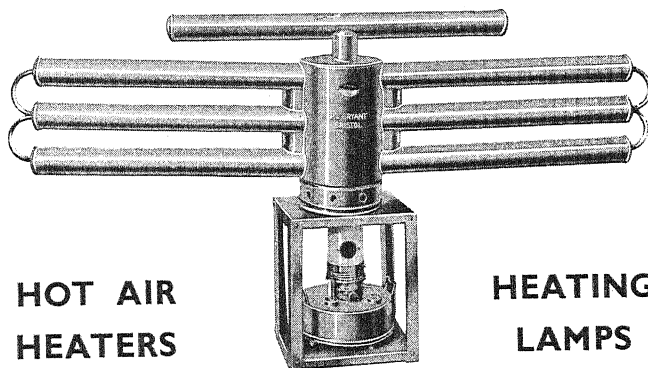
Four volumes, illustrated in line, £10. 10s. net.

Nicholson's *Dictionary of Gardening* was the indispensable Encyclopaedia which all gardeners of the past generation used and consulted regularly. With the flood of new introductions and new developments in the technique of pest control it inevitably became incomplete and out of date. This new Dictionary is based on Nicholson's but has been completely revised and much new material has been added. It aims at describing every plant suitable for cultivation in the British Isles both outdoors and under glass, thereby also covering almost all plants suitable for cultivation in temperate climates. As in addition notes on many tropical and sub-tropical plants are included, the Dictionary should prove valuable to gardeners all over the world.

OXFORD UNIVERSITY PRESS

Amen House, London, E.C.4.

## BRYANT'S GREENHOUSE HEATERS B - R - Y - A - N - T'S



**HOT AIR  
HEATERS**

**HEATING  
LAMPS**

**Paraffin-Water Radiators**

*Write for complete illustrated catalogue*

*Actual designers and manufacturers :—*

**P. J. BRYANT, Forest Road, Fishponds, BRISTOL**



A. G. STREET

*the greatest countryman of our day  
in collaboration with*

MACDONALD HASTINGS

*publish their own monthly  
Country Magazine*

*Regular Contributors  
include:*

Anthony Armstrong  
The Marchioness of Bath  
"B.B."

James Fisher  
W. P. Matthew  
Esther McCracken  
Hubert Phillips  
Constance Spry  
Brian Vesey-Fitzgerald

## Country Fair

*2/6 from all Bookstalls, Newsagents, etc. Should you  
have any difficulty in obtaining your copy please write  
direct to The Circulation Manager, "Country Fair",  
Aldworth Press, 2 Lowndes Street, London, S.W.1*

**GARDEN LOVERS** in the midst of the beauty of our gardens and parks, rarely hear of the tragedy of gardeners' widows left with young children. In a State which dispenses benevolence with such freedom but fails to acknowledge the plight of fatherless little ones, the mothers turn gratefully to the help of a charity dependent upon your goodwill and generosity. For over 60 years we have helped these children to the limit of our income—must we fail now?

All donations gratefully acknowledged by the Secretary

**THE ROYAL GARDENERS' ORPHAN FUND**

34 Wellington Street, London, W.C.2

## THE STUDIO

A magazine devoted to the appreciation of the visual arts.

The garden lover—a man of culture in many senses of the word—will find within its pages a rich and varied scene: art pure, and art in its many applied forms. The illustrations are superbly rendered in black-and-white and full colour. Current exhibitions in Paris, and London are regularly reviewed.

A subscription may be taken out at 36 shillings a year or single copies may be purchased, price 3 shillings each. An illustrated prospectus will be sent on request.

THE STUDIO LIMITED 66 CHANDOS PLACE LONDON WC2